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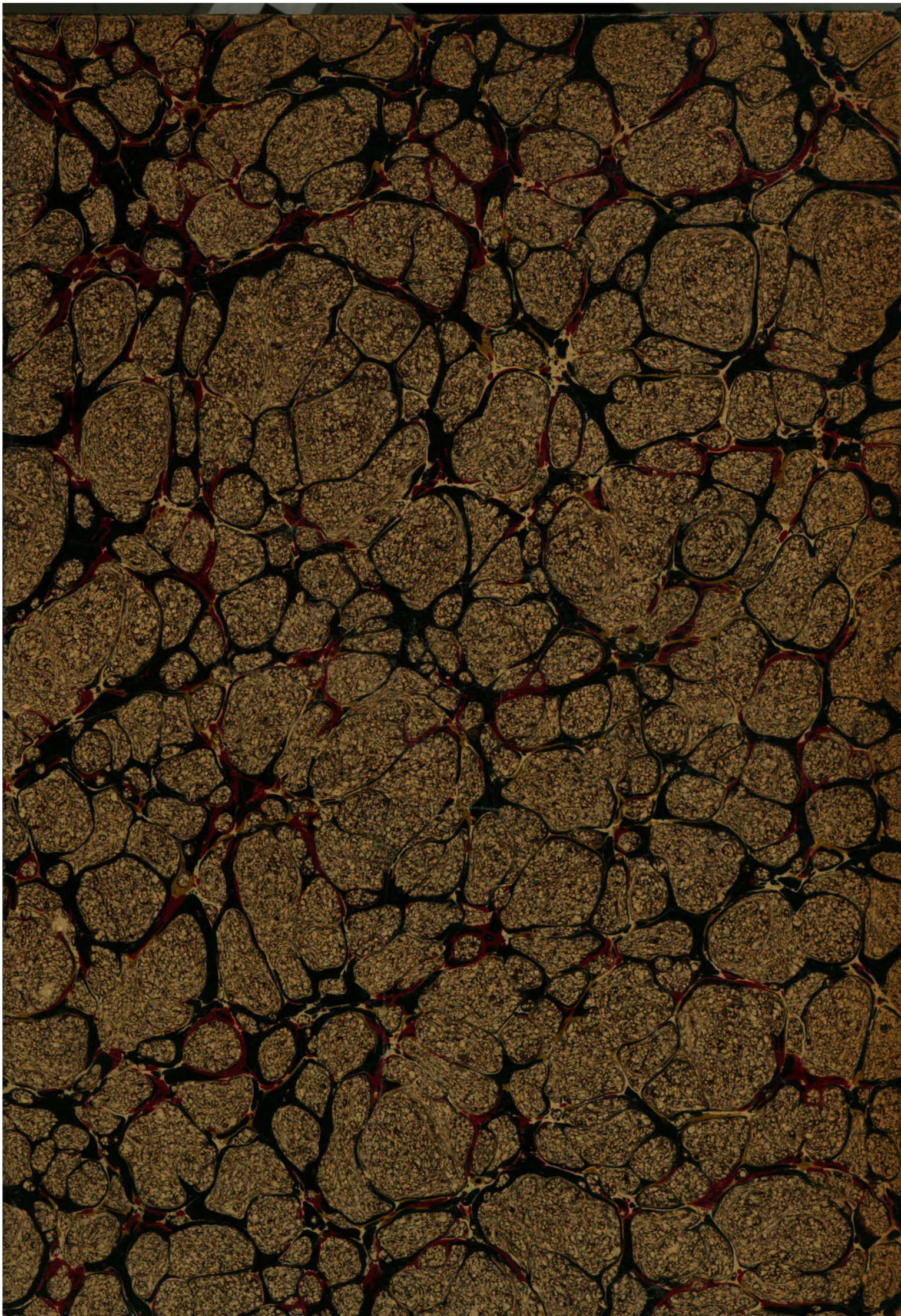
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THE MOTOR WORLD

Volume VIII
No. 1

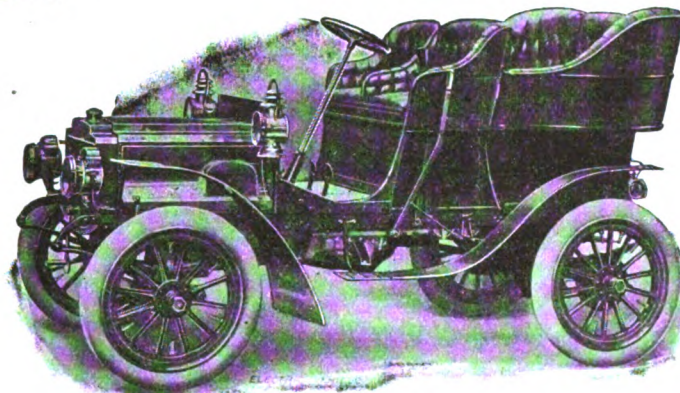
New York, N. Y., U. S. A., March 31, 1904

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PRICE
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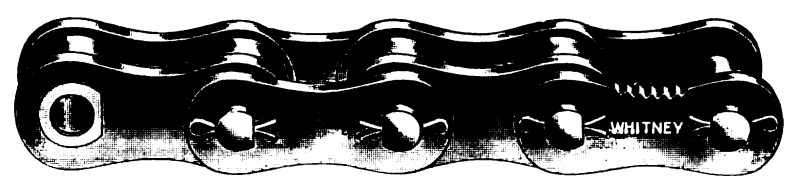
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NEW CONSTRUCTION.



(Patent pending.)

"Whitney" Cotter Detachable Links
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DIRECTIONS.

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When it is desired to remove the chain from the sprockets always look for the special Notched Connecting Link.

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knew as we know how much better than any other past or present
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DIAMOND 1904 TIRES

The remainder—well, there are a few who won't see, anyhow ;
some don't care and some have friends to favor.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York, U. S. A., Thursday, March 31, 1904.

No 1

DEVICE OF FLAMING MERIT

**How Racing Chauffeur Joe Tracy Proposes to
Abolish Ignition Troubles.**

For the total abolition of ignition troubles a device that had an unostentatious but very practical demonstration of its efficiency was seen a few days ago on West Thirty-eighth street, New York.

Joseph Tracy, the racing chauffeur, who is so good a practical mechanic and engineer that he has been called upon in court cases as an expert, drove up a nine horsepower Darracq to the curb and came to a halt. The engine kept working away, and when Tracy lifted the hood he called the attention of the bystanders to the fact that the wire from the batteries to the spark plug was disconnected, and that the engine was running without any sparking. "It would never stop as long as the gasoline held out," remarked Tracy, smilingly.

The onlookers jeered incredulously, but there was the wire dangling free from the spark plug. Tracy explained that the engine was running on an ignition system of his own, and he drew the patent papers from his pocket and displayed them proudly. He calls it an automatic igniter, and it is suggestive of the hot tube system, but is wholly different.

Tracy makes use of the upper part of the exhaust tube and the exhaust valve for his plan, as being the only parts where the heat is constant enough to support combustion. By drilling out the stem of the valve and inserting a plug of his own design he forms a chamber into which the mixture is forced from the cylinder head, and where it burns slowly when the whole body of mixture is fired while that in the explosion chamber burns rapidly. The slow burning mixture in the pocket of the valve stem preserves a flame long enough to ignite the succeeding charge when it is forced into the Tracy patent flame pocket by the next compression stroke of the piston. The regular exhaust of the explosion chamber is forced out around this pocket in the valve, of course. Tracy claims that the power of ignition will

be retained down to as few as one hundred revolutions a minute and the great virtue of it is that it is absolutely sure. There can be no misfiring after his flame cell gets to working, says Tracy. Of course the engine is started by means of a battery and spark plug, but after it is running the current is switched off and there is sure ignition and then the batteries are being saved.

Tracy has not exploited his device to any extent, but the practical demonstration of it is wonderfully impressive and convincing.

Want Searchmont Property Sold.

Permission has been asked of the courts by the trustees of the Searchmont Automobile Co. to sell the real estate of that concern. It consists of the factory buildings at Trainer, Pa., with the machinery, materials and stock, and the land occupied by the buildings. The petition filed with the district court of the United States for the Eastern District of Pennsylvania asks "leave to sell at public sale, free and clear of the lien of a certain mortgage executed the twenty-sixth day of October, 1902, by the above named bankrupts, to the North American Trust Company as trustee, in the sum of three hundred and fifty thousand dollars, to secure an issue of bonds of that amount, the real estate of the said bankrupts."

The fund derived from the sale of the mortgaged premises is to be held by the trustees in bankruptcy, subject to the lien of said mortgage, until final distribution is made. A meeting will be held for the consideration of said petition at Room 6, Post Office Building, northeast corner of Ninth and Chestnut streets, Philadelphia, on the twelfth day of April, 1904, at three o'clock P. M.

New Pope Building for New York.

A new automobile station of considerable pretensions, combining salesrooms, repair-shop and storage rooms, is soon to be erected for the Pope Motor Car Company on Broadway, near the northwest corner of Fifty-fifth street, New York. A long lease has been taken by the Pope Company on a tract of land that has a frontage of 75 feet on Broadway, next to the corner lot, runs back 100 feet from Broadway, and then extends out to Fifty-fifth street, where it has a frontage of 25 feet. On this land the owners are to erect a four story building in the shape of an L, which will be fitted out as a modern automobile establishment.

EIGHTEEN VEHICLES ENTERED

For Commercial Contest, Nine of Them in Second Class—Newcomers Among Entrants.

Entry lists for the second contest of commercial motor vehicles under the auspices of the Automobile Club of America were closed on Monday night last. A total of eighteen trucks and wagons were then enlisted for the competition, which is to begin on Monday, April 4 and continue daily until Saturday night, April 9.

The list of competitors is particularly interesting in that it reveals the fact of there being a proper balance between supply and demand. Evidently the type of commercial automobile being most produced is the medium weight wagon made to carry from 1,000 to 2,000 pounds, which just now seems to be most in demand. The provisions of the contest divide the competitors into eight classes, according to the hauling capacities, and the second class, which is for wagons carrying from 1,000 to 2,000 pounds, is the one best filled. It has nine entries, or as many as all the other classes taken together.

A few newcomers in this branch of the industry are found among the entries for this year, while some of those that competed last year are missing. The Morgan and the Coulthard trucks, which were contestants last May, are missing from the list, while the vehicles of Charles Rockliff, of Brooklyn, the Lansden Motor Car Co., of Birmingham, Ala. and New York; the Carlson Motor Vehicle Co. and the Consolidated Motor Co. represent the product of new concerns. The entries of the Pope Motor Car Co., Electric Vehicle Co., Fischer Motor Vehicle Co., the Olds Motor Works and the Cantono Electric Tractor Co. are not those of new concerns, but they are all new to the contest, as not one of them was represented last year. The competitors entered this year which were among those in last year's contest are the Knox Automobile Co., the Commercial Motor Co. (entered last year as Arthur Hirschmann) and the Union Motor Truck Co.

Following is the complete list of entries:

First class (to carry 1,000 pounds or under)
—Knox Automobile Co., gasoline delivery wagon; Olds Motor Works, gasoline delivery wagon; Olds Motor Works, gasoline delivery wagon.

Second class (to carry 1,000 to 2,000 pounds)
—Commercial Motor Co., steam delivery wagon; Charles Rockliff, gasoline delivery wagon; Lansden Motor Car Co., electric express wagon; Cantono Electric Tractor Co., electric delivery wagon; Carlson Motor Vehicle Co., gasoline delivery wagon; Knox Automobile Co., gasoline delivery wagon; Pope Motor Car Co., electric delivery wagon; Pope Motor Car Co., electric delivery wagon; Electric Vehicle Co., electric wagon.

Third class (to carry 2,000 to 3,000 pounds)
—Knox Automobile Co., gasoline delivery wagon; Consolidated Motor Co., gasoline wagon.

Fourth class (to carry 3,000 to 4,000 pounds)
—Union Motor Truck Co., gasoline stake truck.

Fifth class (to carry 4,000 to 5,000 pounds)
—Electric Vehicle Co., electric truck.

Sixth class (to carry 5,000 to 6,000 pounds)
—None.

Seventh class (to carry 6,000 to 8,000 pounds)—None.

Eighth class (to carry 8,000 to 10,000 pounds)—Fischer Motor Vehicle Co., gasoline-electric truck; Commercial Motor Co., steam truck.

The Knox and Olds delivery wagons are well enough known to those acquainted with the trade, a Knox car having been foremost in last year's contest as a perfect performer. The steam truck and delivery wagons designed by Arthur Herschmann, who is now president of the Commercial Motor Co., were in last year's competition, and were conspicuous as good performers. The Rockliff gasoline wagon is a new production, and is herewith illustrated. The Lansden Motor Car Co.'s wagon is another new one, and it also is pictured. This wagon uses the Edison battery, and its performances will therefore be watched with greater curiosity by some who have listened long to the promises and predictions made concerning this battery. The Cantono electric tractor is simply a fore carriage with the batteries and motor mounted on two wheels, so as to be susceptible of being attached to either a brougham or a delivery wagon. It was illustrated in the Motor World last spring. The wagon of the Carlson Motor Vehicle Co., of Brooklyn, is a good deal of a truck, and is a new production of a retail dealer and garage man. The vehicles of the Consolidated Motor Co. and the Union Motor Truck Co. are shown by illustrations, and the other entries are those of vehicles which have been previously illustrated in this paper and are pretty well known.

As has been previously explained, this is to be a very practical sort of a contest, for practical purposes and free from fancy rules based on theory. All the contestants except the trucks for hauling four and five tons will be turned over to the American and Westcott Express companies next Mon-



THE ROCKLIFF GASOLENE DELIVERY WAGON.

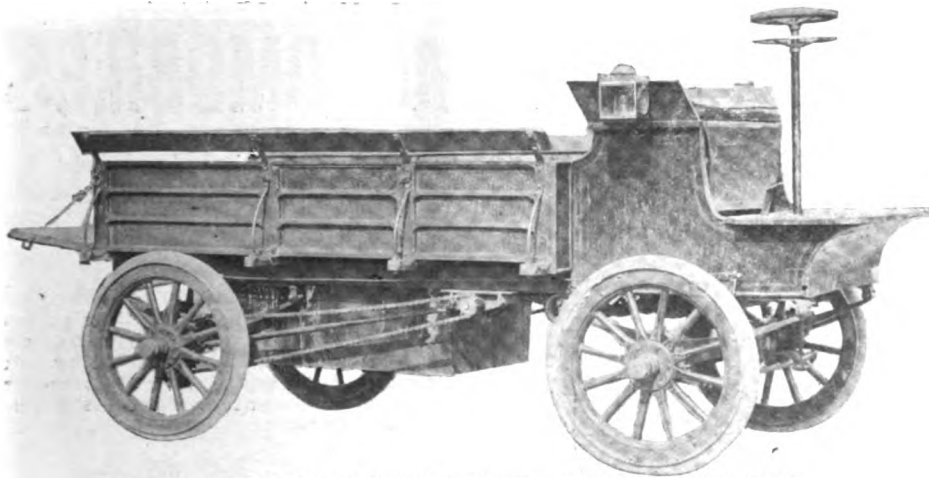
day morning for a week's service at the regular routine work of that concern as attended to by its horse drawn vehicles. On each vehicle will be an odometer, so that its exact mileage every day can be recorded, and each will carry an official observer, appointed by the contest committee of the club, who will keep a record of all stops, accidents, repairs, etc. The maximum load for each vehicle has been named by the owner, and the observers will see that no one is overloaded. The vehicles will be stored at night under guard, and no work done on them unless the observer is present to note it.

The object of the contest is to get data

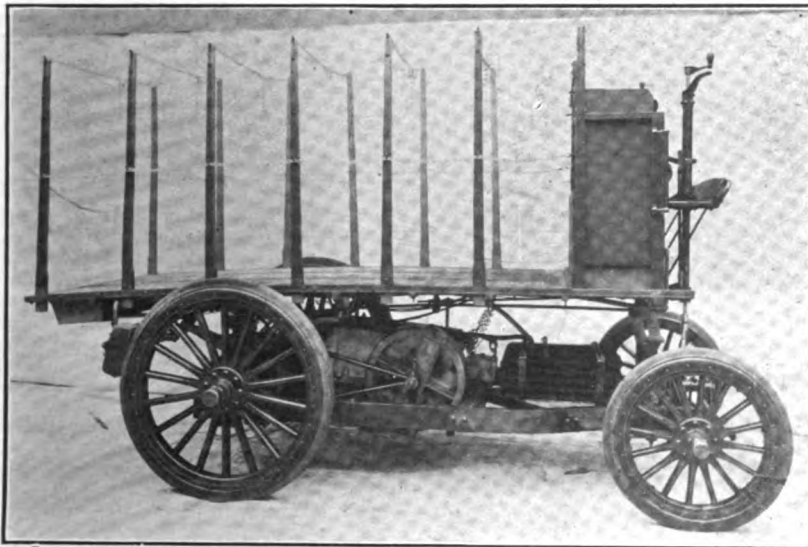
that will enable the committee to tell just what is the running cost of each vehicle for each ton mile. While the wagons are at work for the express company, the heavy trucks will be in the service of the H. Clausen & Sons' Brewing Co., and thus each will be in direct competition with horsedrawn vehicles doing the same work. Owing to this a direct comparison on a flat basis of the cost for a ton mile can be made. The routes to be covered by the different contestants each day have been laid out, so that each vehicle will get during the week as nearly as possible exactly the same tasks in the way of long and short hauls as all the others of its class.



CONSOLIDATED CO.'S FRICTION DRIVE GASOLENE WAGON.



LANSDEN ELECTRIC, WITH EDISON BATTERIES.



UNION GASOLINE STAKE TRUCK.



OLDS GASOLINE DELIVERY WAGON.

The competing vehicles are to be officially weighed in on Saturday at Forty-ninth-st. and Eighth-ave.

The contest committee of the club which has charge of the event consists of John A. Hill, Emerson Brooks, Roland Conklin and Secretary S. M. Butler.

Chicago Contempt Order Withdrawn.

Judge Kohlsaat, of Chicago, Ill., has withdrawn the order entered a day earlier citing the members of the firm of Church, McMurdy & Sherman to appear in the United States District Court to show cause why they should not be adjudged in contempt of court for violating an injunction in the case of the Chicago Motor Vehicle Co., of Harvey, Ill., alleged bankrupt.

Attorney Church, for the company, appeared in court and represented that a case started in the State courts, which was the basis of the charges, had been withdrawn. He said that when the case was started he was in ignorance of the existence of Judge Kohlsaat's restraining order.

Judge Kohlsaat entered an order requiring the petitioning creditors in the motor vehicle bankruptcy proceedings to file a \$50,000 bond. Attorney S. M. Meek, who represents about 95 per cent of the creditors, said he believed the Chicago Motor Vehicle Co to be in a solvent condition.

Recent Incorporations.

Detroit, Mich.—Little Four Automobile Mfg. Co., with \$25,000 capital.

Buffalo, N. Y.—Bison Motor Company, with \$25,000 capital. Directors: Frederick Wende and W. A. Lutz, of Buffalo, and F. I. Alliger, of Tonawanda.

Chicago, Ill.—Wender Motor Co., with \$25,000 capital; to manufacture engines, motors and automobiles. The incorporators are Albert N. Eastman, W. C. McHenry and Harold F. White.

New York, N. Y.—Moore & Munger Co., with \$5,000 capital; to deal in automobiles. Incorporators and directors for the first year, George W. Moore, L. De F. Munger and C. C. Moore, New York City.

Referee Orders Conrad Business Sold.

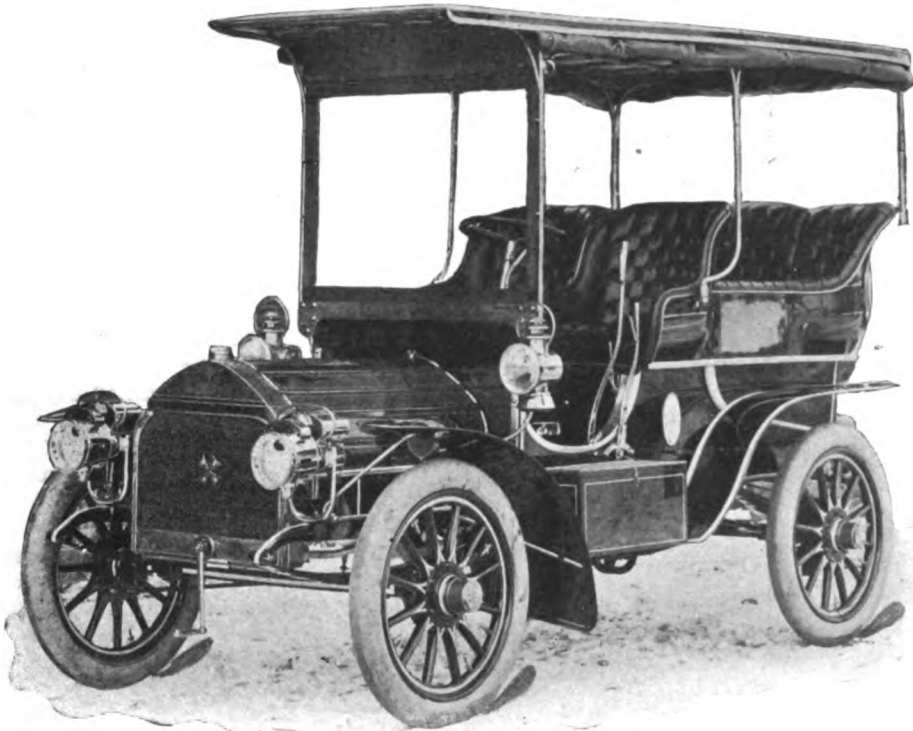
Although the business of the embarrassed Conrad Motor Carriage Co., Buffalo, N. Y., is being run at a loss, it is to be continued until June 1. After that it will be sold.

Referee W. H. Hotchkiss has directed that the business of the Conrad Motor Carriage Co. shall be conducted by W. J. Hayes, trustee in bankruptcy, for eight weeks, and that on June 1 the plant and assets of the concern shall be sold. The trustee is doing considerable business, but at a loss.

Good Month for Exports.

February proved to be a good month for automobile exports, the values being more than double those of February, 1903. The figures are \$127,247 for last month, as against \$63,224 for the same period a year ago. For the eight months of the fiscal year ending with February the figures were almost double those of the corresponding months of 1903, viz., \$1,141,371, as against \$666,223.

THE 1904 HAYNES-APPERSON AUTOMOBILES



were the only 1904 models in the New York to Pittsburg Run and earned Two First Class Awards.

It shows fewer mechanical changes and contains more features that years of use have proved perfect in practice than any other, and is backed by an unequalled past record—seventeen contests entered—seventeen contests won, with stock cars.

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Branch Store: 1420 Michigan Ave., Chicago. Eastern Representatives: BROOKLYN AUTOMOBILE CO., 1239-41-43 Fulton St., Brooklyn, N.Y., and 66 West 43d St., New York. Agents for Western New York: BUFFALO AUTOMOBILE EXCHANGE, 401 Franklin St., Buffalo, N.Y. Agency for Southern California: J. A. ROSESTEEL, Los Angeles.

Tonneau, \$2550 complete; \$2450 without top or front glass. For particulars see catalogue.

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CABLE ADDRESS, "MOTORWORLD," NEW YORK

Entered as second-class matter at the New York, N. Y., Post Office, November, 1900.

NEW YORK, MARCH 31, 1904.

Many Trades Hit Hard.

Scarcely within the memory of the oldest inhabitant has so backward a spring followed a winter of such uninterruptedly severe character. Frigidity long drawn out it may well be termed, and not even the expiration of the forty days which ensued after the groundhog saw his shadow and was frightened back into his lair, availed to break the long spell of arctic weather. To-day, on the threshold of April, when the vernal season should be in evidence everywhere, the streams and ponds are choked with ice, the ground is a solid mass, the frost being three or four feet deep, and the Frost King has scarcely relaxed his grip one particle. As soon as he does the long threatened floods will follow and add their quota to the grand total of damage.

This damage is almost incalculable. It has hurt the automobile business tremendously, as we all know, but we are apt to overlook

the fact that it has not been singled out for this sinister visitation. It is only one sufferer, and if, as the adage has it, "misery loves company," the trade need not fear loneliness. A sort of semi-paralysis has seized all business having to do directly with outdoor sports and pastimes, as well as many others not so associated. Merchants everywhere are complaining. They display their wares in vain. Who wants spring hats, shoes or other clothing while compelled to stick fast to the heavy winter overcoat and to fight colds and chills even more strenuously than during the months of January and February?

All this makes for a shortened season, and, what is, perhaps, quite a bad, a shrinkage of resources just when it is most needful that they be ample. Store expenses run on, even when sales are slack and deliveries nil. Deposits on sales help out wonderfully, but there is not a dealer in this broad land who will not heave a sigh of profound relief when winter's embargo is finally and completely lifted.

At the same time there is a silver lining to the cloud. The longer the closed period the keener the motorist's appetite becomes. Deprived temporarily of the pleasure of his favorite pursuit, his appetite becomes whetted to a keener edge, and at the first appearance of balmy weather he betakes himself to motoring with proportionately greater zest. So with the purchaser. He may think of buying, and even do a little looking around when the cold is stinging or the skies are overcast. But it takes a sunny, warm day to bring him to the ordering point.

No better evidence of this can be found than a view of Thirty-eighth street or other automobile centers on one of the few half way pleasant days we have had vouchsafed us. The streets and stores are thronged with motorists and prospective motorists. Cars filled with interested persons and in charge of demonstrators roll out of the garaged bound for the parks or boulevards. Outdoors beckons with irresistible force, and bustle and animation prevail everywhere.

This instantaneous quickening of the trade pulse coincident with an improvement in the weather is felt by the makers, too. Dealers who are quiescent in bad weather notwithstanding the tardy receipt of cars, are stirred to activity whenever the thermometer rises and the sun shines. On a day of this kind recently one manufacturer was in receipt of no less than twenty-seven telegrams, urgently requesting immediate ship-

ment of cars. Two or three days of fine weather frequently results in an invasion of the factories by dealers keen after belated cars.

Future of the Runabout.

Within a couple of years the steam runabout was a common sight on our city streets, probably equalling in number all other types combined. To-day it is banished to the country districts, and the average city dweller has forgotten that such a vehicle ever existed.

Is a like fate to overtake the gasoline runabout—the one-time typical American motor vehicle? There are not lacking indications of such a fate; and it seems a safe prophecy that it will never again occupy the center of the stage, as it has in the past. Not only is this particular type of runabout being hard pressed by more or less close approaches to the European type of bonneted vehicle, but the vogue of the touring car is now so great—and is still growing—that it almost threatens the extinction of the two passenger type.

The overwhelming popularity of the touring car, in some of its many forms, as evidenced at the shows this winter, is well known. Now that the selling season, in spite of its backwardness, has opened, it is interesting to note that this vogue of the touring car, as revealed by actual purchases, is real and seemingly enduring. It engrosses the attention of buyers and sellers alike, almost to the exclusion of the runabout type.

In a conversation with one New York dealer it was brought out that the tonneau models were the chief, almost the only, sellers, and this although such models were new this year. The runabout, which was the only model in 1903, was almost completely side-tracked. Buyers wanted cars that could carry more than two people—preferably a convertible car, i. e., one with a detachable tonneau—and the increased price of such a car rarely turned them from their purpose. Other dealers found the same state of affairs. Some of them, however, looked for an increased trade in runabouts when the season was a little further along—that is, when the general or outside public entered the field as buyers. The present purchasers are the enthusiasts who have followed the winter's shows and are familiar with the prevailing tendencies, and in some instances helped to shape them.

There is probably considerable truth in this theory. The trend toward touring cars is too pronounced, too general, to continue without abatement. A reaction, if only a

slight one, may reasonably be looked for. It will be aided by the intrinsic merit of the runabout itself. Aside from its economy of cost and operation, it is better suited to many uses to which an automobile must be put. It is not always necessary, possible or desirable to carry a full complement of passengers in a tonneau car, and while the detachment of the rear seat helps matters materially there are still several disadvantages as compared to the runabout. The touring car is sprung to carry a full load, and is not particularly comfortable with only a partial one. The extra power is not needed for two passengers, but the extra gasoline is consumed nevertheless.

In short, there is a field, and a large one, for the runabout, and it can no more become obsolete than can the horse-drawn buggy, which outnumbers all other horse-drawn carriages in this country.

[The Unnecessary Law.

In another place in this issue is printed the full text of the Hill-Cocks Automobile bill, and as it now seems certain to become a law it is worth a careful study, as automobilists cannot become acquainted with the operative statute too soon.

This bill, which originally was drafted by President W. H. Hotchkiss of the New York State Automobile Association and has been supported by that organization, has been repeatedly amended in a way that makes its history a peculiar one.

In summing it all up, this history makes it plainer than ever that the dominant idea of the automobilists who have dabbled with legislation has been to obtain special speeding privileges and to sacrifice all other constitutional rights, if necessary, in order to get these speed privileges.

And yet the history of the bill is illuminative of the fact that no automobile legislation has been necessary, and that automobile users would have had the support of the State legislature if they had steadfastly fought against all laws pertaining to them as being class legislation. This is what the Motor World has persistently advocated as the logical attitude of automobilists, instead of that of asking for a high limit of speed and license tags and felonious penalties.

All that ever was needed was for them to be included with all other vehicles in the general highway law by an amendment to it, framed substantially as Section 3 Subdivision 1 of the present bill reads, and the further provision for the erection of signs and

the non-discrimination against automobilists by local authorities.

As matters stand now, the automobilists who, through some inspiration from the "imp of the perverse," have been seeking to have themselves discriminated from other highway users and thereby incriminated, have been to an extent forced back into the general class by their friends (the fancied enemy) the State legislators, who have insisted upon the incorporation of a provision for the adoption of local ordinances and graciously assented to the condition that such local laws must be alike in terms for all classes of highway users.

The law as it stands promises in its working operation to be much more satisfactory than the present Bailey law, adopted last year, although it is loosely drawn and carelessly phrased in places. In the copy from which the reprint in this issue was made, and which is supposed to be a copy of the law exactly as passed, there occurs what seems to be an uncorrected typographical error, which, if uncorrected in the law, will open a gate for serious complications. It occurs in Subdivision 2 of Section 1, on line three, and requires that in the "built up" portion within half a mile from a village postoffice, the authorities shall erect a sign reading, "slow down for ten miles." Obviously it should be "slow down to ten miles."

There are several features of the new law which will be fruitful of improved conditions. One provision requires that local authorities shall erect signs at all places where the law requires a change of speed, so that tourists may know when they emerge from a proscribed zone as well as when they enter it. Another point is that village authorities cannot now extend their speed restricting signs to any distance that "in their judgment" it is desirable to have them.

It is important, too, that the minor infractions of the law, such as forgetting to carry a horn or having no light, are not so severely punishable as the speed violations and do not count in the series of convictions. The provision for stopping at signal on the road has been modified so that one is required to pause for only a "reasonable" time, and cannot be held up indefinitely by a horseman going in the same direction; a horseman is now required to pull over to the right hand side of the road to allow an automobile to pass. The provisions for licensing and tagging are more consistent than before, and the fee has been raised from \$1 to \$2. The arrangements for manufacturers and deal-

ers to have as many duplicate tags of the same number as he wants at 50 cents each is reasonable.

The most significant feature of the law is that which permits local authorities to enact speed regulations, but says that they shall not restrict speed anywhere below ten miles an hour, and cannot make any laws for automobiles especially, but must include horsemen and all classes of highway users in any local ordinances that are passed, and provide the same penalty for all for infraction.

It is argued by the supporters of the bill that in operation the effect of this feature of the bill will be this: Municipalities that are unfriendly to automobilists will not pass any local ordinances because they will then be operating in that town under the State law, which is more severe than anything which could be locally enacted and enforced because of the necessity of including horsemen under the same conditions; municipalities that are friendly to automobilists will, on the other hand, adopt some reasonably lenient rules to apply to horsemen and automobilists alike, and these, under the law, will supersede the State law in that locality. It will not be possible to arrest a man for the violation of a local ordinance and punish him under the State law.

This is nice in theory, but after what has been seen in the way of travesties on justice we can quite conceive of a motorphobe community adopting local ordinances of barbarous severity, which nominally will apply to all classes of highway users, but which will be employed solely for the discomfort of automobilists. Some gentle "justice" might, for instance, make it a rule to "suspend sentence" on horsemen convicted of speeding, and might sentence automobilists to the maximum penalty for the same offence.

For a third conviction the new law provides a punishment of both fine and imprisonment, but it does not make it compulsory for the judge to impose both fine and imprisonment, as the present law does. Under the new statute a judge, if he punishes, must impose imprisonment as well as a fine, but if he chooses may "suspend sentence," which, under the present law, he may not do.

Under the new law two tags will be necessary on each car.

As the new law annuls all city ordinances now existing in conflict with it, it will be interesting to see how the statute will affect New York City, where the police occasionally rise superior to all law.

NEW LAW FOR NEW YORK

Full Text of the Hill Bill, Which has Passed the Senate and Will Probably Soon Become a Statute.

On Tuesday the Hill-Cocks automobile bill for New York State was passed by the Senate at Albany and at the time the Motor World was going to press the reports from the State capital indicated that within a few days the same bill would be offered to the Assembly as an accepted substitute by Mr. Cocks and would be passed and promptly signed. Tuesday night, at the regular meeting of the Automobile Club of America, this much amended bill, in the form that it was passed was the subject of the discussion.

President Scarritt related the work done to defeat by modification the proposed amendment giving unqualified power to local municipalities to regulate speed, and he explained the features of the bill and their working effect, and answered questions until every one was satisfied that when it is a law the automobilists will be much more favored than they are under the present statute. The full text of the bill, as passed by the Senate, follows:

Section 1. Subdivision 1. Short title.—The short title of this act shall be the "motor vehicle law." Except as otherwise herein provided, it shall be controlling, (1) upon the registration and numbering of motor vehicles and chauffeurs, (2) on their use of the public highways, and (3) on the penalties for the violation of any of the provisions of this act.

Subdivision 2. Definition.—The words and phrases used in this act shall, for the purposes of this act, unless the same be contrary to or inconsistent with the context, be construed as follows: (1) "motor vehicle" shall include all vehicles propelled by any power other than muscular power, excepting such motor vehicles as run only upon rails or tracks, provided that nothing herein contained shall, except as provided by subdivision four of section three of this act, apply to motorcycles, motor bicycles, traction engines or road rollers; (2) "public highways" shall include any highway, county road, State road, public street, avenue, alley, park, parkway, driveway or public place in any city, village or town; (3) "closely built up" shall mean, (a) the territory of a city, village or town contiguous to a public highway which is at that point built up with structures devoted to business, (b) the territory of a city, village or town contiguous to a public highway not devoted to business, where for not less than one-quarter of a mile the dwelling houses on such highway average less than one hundred feet apart, and also (c) the territory outside of a city or village contiguous to a public highway within a distance of one-half mile from any postoffice, provided that for a distance of at least one-quarter of a mile within such limits the dwelling houses on such highway average less than one hundred feet apart, and provided further that the local authorities having charge of such highway shall have placed conspicuously thereon signs of sufficient size to be easily readable by a person using the highway, bearing the words

"Slow down for ten miles," and also an arrow pointing in the direction where the speed is to be reduced; (4) "local authorities" shall include all officers of counties, boroughs, cities, villages or towns, as well as all boards, committees and other public officials of such counties, boroughs, cities, villages or towns; (5) "chauffeur" shall mean any person operating a motor vehicle as mechanic, employe or for hire.

Section 2. Subdivision 1. Filing statement.—Every person hereafter acquiring a motor vehicle shall, for every vehicle owned by him, file in the office of the Secretary of State a statement of his name and address, with a brief description of the vehicle to be registered, including the name of the maker, factory number, style of vehicle and motor power, on a blank to be prepared and furnished by such secretary for that purpose; the filing fee shall be two dollars.

Subdivision 2. Registration and record.—The Secretary of State shall thereupon file such statement in his office, register such motor vehicle in a book or index to be kept for that purpose, and assign it a distinctive number.

Subdivision 3. Registration seal.—The Secretary of State shall forthwith on such registration, and without other fee, issue and deliver to the owner of such motor vehicle a seal of aluminum or other suitable metal, which shall be circular in form, approximately two inches in diameter, and have stamped thereon the words "Registered motor vehicle, No. —, New York motor vehicle law," with the registration number inserted therein; which seal shall thereafter at all times be conspicuously displayed on the motor vehicle, to which such number has been assigned.

Subdivision 4. Owners previously registered.—If the vehicle has been previously registered; the certificate issued thereon shall be returned to the Secretary of State and in lieu thereof such secretary shall issue to said owner a registration seal containing the number of such previous registration, upon payment of a fee of one dollar. Upon the sale of a motor vehicle, the vendor, except a manufacturer or dealer, shall, within ten days, return to the Secretary of State the registration seal affixed to such vehicle.

Subdivision 5. Display of registration number.—Every motor vehicle shall also at all times have the number assigned to it by the Secretary of State displayed on the back of such vehicle in such manner as to be plainly visible, the numbers to be in Arabic numerals, black on white ground, each not less than three inches in height, and each stroke to be of a width not less than half an inch, and also a part of such number the initial letters of the State in black on white ground, such letters to be not less than one inch in height.

Subdivision 6. Registration by manufacturers or dealers.—A manufacturer or dealer in motor vehicles shall register one vehicle of each style or type manufactured or dealt in by him, and be entitled to as many duplicate registration seals for each type or style so manufactured or dealt in as he may desire on payment of an additional fee of fifty cents for each duplicate seal. If the registration seal and the corresponding number shall thereafter be affixed to and displayed on every vehicle of such type or style as in this section provided, while such vehicle is being operated on the public highways, it shall be deemed a sufficient compliance with subdivisions one, three, five and eight of this section, until such vehicle shall be sold or let for hire. Nothing in this subdivision shall be

construed to apply to a motor vehicle employed by a manufacturer or dealer for private use or for hire.

Subdivision 7. Fictitious seal or number.—No motor vehicle shall be used or operated upon the public highways after thirty days after this act takes effect which shall display thereon a registration seal or number belonging to any other vehicle, or a fictitious registration seal or number.

Subdivision 8. Unregistered vehicle not to be operated.—No motor vehicle shall be used or operated upon the public highways after thirty days after this act takes effect, unless the owner shall have complied in all respects with this section, except that any person purchasing a motor vehicle from a manufacturer, dealer or other person after this act goes into effect shall be allowed to operate such motor vehicle upon the public highways for a period of five days after the purchase and delivery thereof, provided that during such period such motor vehicle shall bear the registration number and seal of the previous owner under which it was operated or might have been operated by him.

Subdivision 9. Exemption of non-resident owners.—The provisions of this section shall not apply to motor vehicles owned by non-residents of this State, provided the owners thereof have complied with any law requiring the registration of owners of motor vehicles in force in the State, territory or federal district of their residence, and the registration number showing the initial of such State, territory or federal district shall be displayed on such vehicle substantially as in this section provided.

Section 3. Subdivision 1. Speed permitted.—No person shall operate a motor vehicle on a public highway at a rate of speed greater than is reasonable and proper, having regard to the traffic and use of the highway, or so as to endanger the life or limb of any person, or the safety of any property; or in any event on any public highway where the territory contiguous thereto is closely built up, at a greater rate than one mile in six minutes, or elsewhere in a city or village at a greater rate than one mile in four minutes, or elsewhere outside of a city or village at a greater rate than one mile in three minutes; subject, however, to the other provisions of this act.

Subdivision 2. Speed at crossings, et cetera.—Upon approaching a bridge, dam, sharp curve, or steep descent, and also in traversing such bridge, dam, curve or descent, a person operating a motor vehicle shall have it under control and operate it at a rate of speed not exceeding one mile in fifteen minutes, and upon approaching a crossing of intersecting highways at a speed not greater than is reasonable and proper, having regard to the traffic then on such highway and the safety of the public.

Subdivision 3. Meeting horses, et cetera.—Upon approaching a person walking in the roadway of a public highway, or a horse or horses, or other draft animals, being ridden, led or driven thereon, a person operating a motor vehicle shall give reasonable warning of its approach, and use every reasonable precaution to ensure the safety of such person or animal, and, in the case of horses or other draft animals, to prevent frightening the same.

Subdivision 4. Stopping on signal.—A person operating a motor vehicle or motorcycle or motor bicycle shall, at request or on signal by putting up the hand, from a person riding, leading or driving a restive horse or horses or other draft animals, bring such

motor vehicle, cycle or bicycle immediately to a stop, and, if travelling in the opposite direction, remain stationary so long as may be reasonable to allow such horse or animal to pass, and, if travelling in the same direction, use reasonable caution in thereafter passing such horse or animal; provided that, in case such horse or animal appears badly frightened or the person operating such motor vehicle is requested so to do, such person shall cause the motor of such vehicle, cycle or bicycle to cease running so long as shall be reasonably necessary to prevent accident and insure the safety of others.

Subdivision 5. Giving name and address.—

In case of accident to a person or property on the public highways, due to the operation thereon of a motor vehicle, the person operating such vehicle, shall stop, and, upon request of a person injured, or any person present, give such person his name and address, and, if not the owner, the name and address of such owner.

Subdivision 6. Speed tests and races.—

Local authorities may, notwithstanding the other provisions of this section, set aside for a given time a specified public highway for speed tests or races, to be conducted under proper restrictions for the safety of the public.

Section 4. Subdivision 1. Rules of the road.—Whenever a person operating a motor vehicle shall meet on a public highway any other person riding or driving a horse or horses, or other draft animals, or any other vehicle, the person so operating such motor vehicle shall seasonably turn the same to the right of the center of such highway so as to pass without interference. Any such person so operating a motor vehicle shall, on overtaking any such horse, draft animal or other vehicle, pass on the left side thereof, and the rider or driver of such horse, draft animal or other vehicle shall, as soon as practicable, turn to the right so as to allow free passage on the left. Any such person so operating a motor vehicle shall at the intersection of public highways, keep to the right of the intersections of the centers of such highways when turning to the right and pass to the right of such intersection when turning to the left. Nothing in this subdivision shall, however, be construed as limiting the meaning or effect of the provisions of section three of this act.

Subdivision 2. Brakes, lamps, horns, et cetera.—Every motor vehicle while in use on a public highway shall be provided with good and efficient brakes, and also with a suitable bell, horn or other signal and be so constructed as to exhibit, during the period from one hour after sunset to one hour before sunrise, two lamps showing white lights visible within a reasonable distance in the direction toward which such vehicle is proceeding, showing the registered number of the vehicle in separate Arabic numerals, not less than one inch in height and each stroke to be not less than one-quarter of an inch in width, and also a red light visible in the reverse direction.

Subdivision 3. Local ordinances prohibited.—Subject to the provisions of this act, local authorities shall have no power to pass, enforce or maintain any ordinance, rule or regulation requiring of any owner or operator of a motor vehicle any license or permit to use the public highways, or excluding or prohibiting any motor vehicle whose owner has complied with section two of this act from the free use of such highways, except such driveway, speedway or road as has been or may be expressly set apart by law for the exclusive use of horses and light carriages, or except as herein provided, in

any way affecting the registration or numbering of motor vehicles or prescribing a slower rate of speed than herein specified at which such vehicles may be operated, or the use of public highways, contrary to or inconsistent with the provisions of this act; and all such ordinances, rules or regulations now in force are hereby declared to be of no validity or effect; provided, however, that the local authorities of cities and incorporated villages may limit by ordinance, rule or regulation hereafter adopted the speed of motor vehicles on the public highways, on condition that such ordinance, rule or regulation shall also fix the same speed limitation for all other vehicles, such speed limitation not to be in any case less than one mile in six minutes in incorporated villages, and on further condition that such city or village shall also have placed conspicuously on each public highway where the city or village line crosses the same and at every point where the rate of speed changes, signs of sufficient size to be easily readable by a person using the highway, bearing the words "Slow down to — miles" (the rate being inserted) and also an arrow pointing in the direction where the speed is to be reduced or changed, and also on further condition that such ordinance, rule or regulation shall fix the penalties for violation thereof similar to and no greater than those fixed by such local authorities for violations of speed limitation by any other vehicles than motor vehicles, which penalties shall during the existence of the ordinance, rule or regulation supersede those specified in section six of this act, and provided further, that nothing in this act contained shall be construed as limiting the power of local authorities to make, enforce and maintain, further ordinances, rules or regulations, affecting motor vehicles which are offered to the public for hire.

Subdivision 4. Parks, parkways and cemeteries excepted.—Local authorities may, notwithstanding the provisions of this act, make, enforce and maintain such reasonable ordinances, rules or regulations concerning the speed at which motor vehicles may be operated in any parks or parkways within a city but, in that event, must, by signs at each entrance of such park and along such parkway, conspicuously indicate the rate of speed permitted or required, and may exclude motor vehicles from any cemetery or grounds used for the burial of the dead.

Subdivision 5. No effect on right to damages.—Nothing in this act shall be construed to curtail or abridge the right of any person to prosecute a civil action for damages by reason of injuries to person or property resulting from the negligent use of the highways by a motor vehicle or its owner or his employe or agent.

Section 5. Subdivision 1. Filing chauffeur's statement.—Every person hereafter desiring to operate a motor vehicle as a chauffeur shall file in the office of the Secretary of State, on a blank to be supplied by such secretary, a statement which shall include his name and address and the trade name and motive power of the motor vehicle or vehicles he is able to operate; and shall pay a registration fee of two dollars.

Subdivision 2. Chauffeur's registration and record.—The Secretary of State shall thereupon file such statement in his office, register such chauffeur in a book or index to be kept for that purpose, and assign him a number.

Subdivision 3. Chauffeur's badge.—The Secretary of State shall forthwith, upon such registration and without other fee, issue and deliver to such chauffeur a badge of

aluminum or other suitable metal, which shall be oval in form, and the greater diameter of which shall not be more than two inches, and such badge shall have stamped thereon the words: "Registered chauffeur, No. —, New York motor vehicle law," with the registration number inserted therein; which badge shall thereafter be worn by such chauffeur pinned upon his clothing in a conspicuous place at all times while he is operating a motor vehicle upon the public highways. If the operator or chauffeur has previously been registered in the office of the Secretary of State, the certificate heretofore issued to him, shall be returned to such secretary, who shall issue to said operator or chauffeur, in lieu thereof, a chauffeur's badge upon the payment of a fee of one dollar.

Subdivision 4. Fictitious badge.—No chauffeur, having registered as herein above provided, shall voluntarily permit any other person to wear his badge, nor shall any person while operating a motor vehicle wear any badge belonging to another person, or a fictitious badge.

Subdivision 5. Unregistered chauffeur cannot operate.—No person shall operate a motor vehicle as a chauffeur upon the public highways after thirty days after this act takes effect, unless such person shall have complied in all respects with the requirements of this section.

Section 6. Subdivision 1. Penalties for excessive speed, et cetera.—The violation of any of the provisions of subdivision five of section two, or of subdivision seven of section two, or of section three, or of section five of this act, or any ordinance, rule or regulation adopted by local authorities in pursuance of subdivision four of section four of this act, shall be deemed a misdemeanor, punishable by a fine not exceeding one hundred dollars for the first offense, and punishable by a fine of not less than fifty dollars nor more than one hundred dollars, or imprisonment not exceeding thirty days, or both, for the second offense, and punishable by a fine of not less than one hundred dollars nor more than two hundred and fifty dollars and imprisonment not exceeding thirty days for a third or subsequent offense.

Subdivision 2. Penalties for other violations.—The violation of any other provision of this act shall be punishable by a fine not exceeding twenty-five dollars for the first offense, a fine not less than twenty-five dollars nor more than fifty dollars for a second offense, and a fine not less than fifty dollars nor more than one hundred dollars, or imprisonment not exceeding ten days, or both, for a third or subsequent offense.

Subdivision 3. Release from custody, bail, et cetera.—In case the owner of a motor vehicle shall be taken into custody because of a violation of any provision of this act, he shall be forthwith taken before an accessible captain or sergeant or acting sergeant of police in any city or village, or any justice of the peace or magistrate, and be entitled to an immediate hearing; and if such hearing cannot then be had, be released from custody on giving his personal undertaking to appear in answer for such violation, at such time and place as shall then be indicated, secured by the deposit of a sum equal to the maximum fine for the offense with which he is charged, or in lieu thereof, by leaving the motor vehicle, being operated by such person, with such officer, or, in case such officer is not accessible, be forthwith released from custody on giving his name and address to the officer making such arrest, and depositing with such officer a sum

equal to the maximum fine for the offense for which such arrest is made, or in lieu thereof, by leading the motor vehicle, being operated by such person, with such officer, provided, that in such case the officer making such arrest shall give a receipt in writing for such sum or vehicle and notify such person to appear before the most accessible magistrate, naming him, on that or the following day, specifying the place and hour. In case security shall be deposited, as in this subdivision provided, it shall be returned to the person depositing, forthwith on such person being admitted to bail as provided in section five hundred and fifty-four of the code of criminal procedure, and the return of any receipt or other voucher given at the time of such deposit. In case such undertaking with security or such deposit shall not be made by an owner so taken into custody, the provisions of section five hundred and fifty-four of the code of criminal procedure shall apply.

Section 7. Acts repealed.—All acts and parts of acts inconsistent herewith or contrary hereto are, so far as they are inconsistent or contrary, hereby repealed.

Section 8. When this act takes effect.—This act shall take effect immediately, except that no penalty shall be asserted or imposed for the violation of any of the provisions of section two or section five hereof committed prior to thirty days after this act takes effect.

To Adjust Long Standing Claims.

A reminder of the much involved and long since defunct Automobile Co. of America comes to hand this week, when Receiver Henry C. Cryder of the concern gives notice to the creditors of his most recent action. He states that "on Tuesday, April 5, 1904, at the Chancery Chambers in the City of Newark, at 10 a. m., I shall apply to the Chancellor for an order confirming an agreement of settlement made between myself as receiver of the Automobile Co. of America and Charles L. Carrick, receiver of the American Motor Co., whereby the claim of the Automobile Co. of America against the American Motor Co. is adjusted at the sum of \$3,716.42, and the claim of the American Motor Co. against the Automobile Co. of America is discharged."

Thomas to Enter Racing Field.

Racing cars, having six cylinders, or double triple cylinders, will form a part of the E. R. Thomas Motor Co.'s product this year. The Buffalo concern proposes to enter the racing field, and to this end will soon begin work on a 50 H.P. double triple engine car, which will be turned out in numbers, and will figure in all the important race meets this season, including the Ormonde events next winter.

The Thomas Co. will also accept special orders for 24, 30 and 40 H.P. double triple engine machines, equipped with the latest designs of Limousine, Thomasine, or Pullman bodies.

What Morlock Creditors May Get.

If present plans are carried out creditors of the bankrupt Morlock Automobile Co., of Buffalo, will receive 40 to 50 per cent of their claims, in addition to the 10 per cent already paid. It is expected that a formal proposition of this nature will be submitted soon.

"IMMEDIATE DELIVERIES"

Statements of This Kind do Harm, Dealer Thinks—Create False Impression.

"Immediate deliveries—Tush!" exclaimed a New York agent, as he sat in his place reading the automobile advertisements in a daily paper on a recent rainy day. Then he unburdened his mind thus:

"Why don't they advertise 'early deliveries,' or 'quick deliveries,' instead of this 'immediate deliveries?' It suggests too strongly a stock of cars piled up from cellar to garret, which must be moved by sales at any price. I think this advertising of immediate deliveries is bad business and it is a question in my mind whether there should be any such thing as immediate deliveries, if the manufacturers and the dealers want to do business all the year around.

"It is human nature to want what we cannot have, or what is hard to get. What brings in orders during January, February and March, with cash deposits on them? Why, only the desire to get something not yet to be had as soon as any one else gets it. If the manufacturers got their new models ready in the Fall and we dealers had actual stocks in hand ready for delivery all through the winter, do you think we would do any business? Not by a jugful. Just as soon as the public knows they can come in at any old time and buy a car and drag it out of the store and home the same day, do you think they will be rushing around in mid-winter buying cars to use in the spring? Not a bit of it. They will wait until April or May and come with a rush when the weather settles. We would be sitting around all winter and spring, paying interest on the money locked up in our stock and doing nothing else.

"I doubt if it is a wise move for the manufacturers to keep striving to have their stocks of new cars ready earlier and earlier until they reach the point when stocks of the new models are on hand in December. When such a time comes there won't be a bit of selling done between October and April, mark my words. Another thing, there should be new models—positively new things—each year. When there cease to be changes and all cars are more or less alike the custom of selling the older car and getting a new one will stop. The 'new model' idea should be kept as long as possible. The history of the bicycle industry has much to teach makers on this subject.

"In the course of competition, I don't suppose makers can be prevented from working on toward the goal of having stocks ready in winter, unless the Licensed Association can regulate matters, but just as soon as there are always stocks on hand for immediate deliveries, like shoes in shoe stores, it will be dull music for the retailers during the winter."

Wheels With Unusual Guarantee.

A five-year guarantee on an article implies an unusual degree of confidence in it, especially when, as in the case of the steel artillery wheel manufactured by the Parish & Bingham Co., Cleveland, O., it is one so liable to severe usage and even abuse. The guarantee includes any break due to accident, and a new wheel will be given or any part replaced without expense.

The wheel is so constructed that each spoke is detachable and can be readily replaced, if injured, thereby saving considerable expense and time. The spokes being threaded at the end attached to the felloe are held in place by a lock nut fastening, which, when screwed up, forces the spoke firmly against the hub, and, being tapered at the hub end, is firmly held in position by flanges bolted so that they are held so securely that it resembles a solid construction and it is an impossibility for the spokes to get out of true. When securely placed in position the lock nut fastening is pinned and cannot possibly become loose, though the spoke can be readily detached by simply knocking out the pin and loosening the lock nut fastening.

The Parish & Bingham Co. has always been noted for its high grade work in making pressed steel sprockets, etc., and the same high grade workmanship enters into their wheel business.

Thomasine and Limousine.

Since the E. R. Thomas Motor Co. brought out their thomasine style of body they have been almost flooded with inquiries as to the difference between a thomasine and the French limousine type of body. In order to satisfy this curiosity the Buffalo concern points out the points wherein the two bodies differ.

"When the glass sides are in place they bear a close resemblance," they say, "but the thomasine may, without alighting, be quickly converted into an open touring car, closely resembling, though more solid, a canopy top car and presenting no more wind resistance.

"It is impossible to convert a limousine into an open car while touring, as there is no receptacle in which to store the glass, and the wide corners and frames present a heavy appearance and offer too much wind resistance."

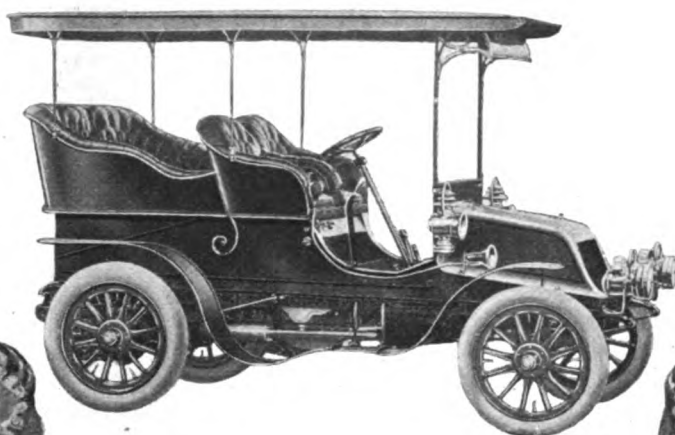
Boston's All-night Garage.

An addition to the number of Boston garages which is to be opened this week is the Oldsmobile, on Stanhope street, in the rear of the Oldsmobile company's offices and salesrooms on Columbus avenue. It will be open day and night, for regular and transit care of vehicles of all sorts, just as a livery stable is open for horse rigs.

New Store for Kalamazoo.

A partnership has been entered into by W. S. Daniels, of Grand Rapids, Mich., and H. O. Harlow, of Kalamazoo, Mich., and a store opened at the latter place. It will be styled the Kalamazoo Automobile Agency.

WINTON



AUTOMOBILES vs. PROMISES.

Early last summer we completed plans for our 1904 model, outlined the present season's manufacturing policy and "got busy." In January we began shipment at the rate of 10 Touring Cars daily. And now, because of our early start and unequalled productive system, we are able to deliver automobiles, while the best you get from some other manufacturers is promises. You can't ride into the country on promises. You can go anywhere with a 1904 Winton Touring Car. Our new catalog illustrates and describes the best Touring Car built in America.

THE WINTON MOTOR CARRIAGE CO.

Member Association Licensed Automobile Manufacturers,

FACTORY AND GENERAL OFFICES:

Cleveland, O., U. S. A.

NEW YORK. BOSTON. PHILADELPHIA. CHICAGO.

Winton Agencies in all important places.



CARNEGIE'S ELECTRIC STRING

Order to Supply his Stable With Four Cars
Goes to Electric Vehicle Co.

A big catch in the way of an order was made this week by F. C. Armstrong, the New York manager of the Electric Vehicle Company. This was the order for the stocking of the new automobile stable of Andrew Carnegie, which is being built for the producer of steel and dispenser of libraries, at No. 55 East Ninetieth street, New York City.

Contrary to the usual manner of procedure, Mr. Carnegie planned first his automobile house and then the equipment of it, instead of getting his cars first and next casting about for a place to keep them. So far as known Mr. Carnegie has not heretofore indulged in the luxury of an automobile, and when it was learned that he had saved up enough to do so and had ordered the construction of a three story automobile house near his New York residence, the whole trade was on the qui vive to learn what cars he wanted to put in it.

It was soon learned that it was Mr. Carnegie's intention to keep in the stable only an assortment of electric vehicles for the use of himself and family in going about the city, and that he had no intention of having any fast cars, or even a touring car. Then, of course, the electric carriage trade was astir to get the order. The various managers went to work through the secretary and head coachman, by mail and otherwise, trying to make the sale, which was expected to be one of four or five cars. At different times it was reported that different firms had obtained it, and the firms themselves thought they were sure of it. Finally, however, Mr. Armstrong got the order and a check for \$2,500 for a deposit on it. In view of the size of the order and the prominence of the man it was a notable capture for the Electric Vehicle Company.

The order is for four vehicles—an opera bus, a landau, a brougham and a victoria. The carriages will not be delivered until September 1, because the new house for them will not be completed much before that time, and Mr. Carnegie does not expect to take up his residence in New York before the middle of September. The total value of the sale is between \$10,000 and \$15,000.

Bailey is Proprietor.

It appears that the report of the opening of a branch house at Milwaukee, Wis., by Thomas B. Jeffery & Co. is erroneous. George Bailey, who was stated to be the manager, is really the proprietor of the establishment at No. 312 Wells street, where he will handle the Rambler line.

Branches for Kalamazoo Concern.

A branch store has been established at Muskegon, Mich., by the Michigan Automobile Co., of Kalamazoo. Norman Graves has been appointed manager. A branch at Holland, Mich., is also contemplated.

Changes in Olds Runabout.

While in outward appearance conforming to the well known lines of the 1903 runabout, the new curved dash type of Oldsmobile has been changed and improved in a number of important particulars. One of the cars was examined by a Motor World representative last week at the local Oldsmobile store, and the various changes noted. Chief of these is the engine, which is now rated at 6 horsepower, instead of 4, as last year, the cylinder dimensions having been increased from $4\frac{1}{2} \times 6$ inches to 5×6 inches. The cylinder and water jacket are now cast in one piece, the two joints formerly used being thus done away with. The transmission and running gear have both been materially strengthened, and hub brakes take the place of the old brake on the transmission.

The body and seat have both been increased three inches in width, and detachable tires are now supplied regularly instead of as an extra. The price remains at \$650.

Company Organized at Youngstown.

Youngstown, O., business men have organized the Mahoning Motor Car Co., with a capital of \$25,000, to build gasoline cars. A runabout and a touring car will be produced, and it is expected that work will be begun in from sixty to ninety days.

At a meeting of the stockholders the following board of directors was selected: L. E. Cochran, W. J. Hitchcock, Judge James B. Kennedy, Warren P. Williamson, D. E. Webster, W. H. Buechner and G. C. Nixon. The directors organized by electing the following officers: President, L. E. Cochran; vice-president, W. J. Hitchcock; secretary, D. E. Webster; general manager and treasurer, W. P. Williamson; superintendent, Charles T. Galtner.

New Michigan Touring Car.

A brand new car, differing radically from the present model, is being produced by the Michigan Automobile Co., Kalamazoo, Mich., and will be ready for delivery in May. It is a light touring car, with removable tonneau, and will be noteworthy for the power developed by its double-opposed, water-cooled, centrally positioned, engine. Each cylinder is $4\frac{1}{2}$ inches by 5 inches, giving full 12 H.P.

The car will be appropriately named the "Car of Power," and will be guaranteed to carry a full load up any climbable hill without faltering. It is equipped with wheel steer, has a bonnet in front, a 78-inch wheel base and standard tread. The detachable tonneau is roomy and comfortable, the springing luxurious, making an easy riding and graceful-appearing car. The transmission is of the sliding gear type, giving three speeds forward and a reverse.

Dispatches from Cleveland under date of March 29 state that the Standard Oil Company has reduced the price on all grades of gasoline 1 cent a gallon. Naphtha is now quoted at $12\frac{1}{2}$ cents and gasoline at 16 cents.

CLASSED BY WEIGHT

New Division for Cars in Commonwealth Avenue
Hill Climb—Some Novel Rules

Classification by weight, instead of by horsepower, has been adopted by the Massachusetts Automobile Club for its hill climbing contest, which is to take place on April 19 on Commonwealth Avenue Hill, Boston. There are five classes provided for, and an innovation in the rules consists of allowing fifteen pounds extra to cars using magnetos or dynamos. The rules have been prepared by Chairman William Wallace of the club's racing committee, and are exceedingly comprehensive.

The five classes are as follows: Class A, for machines weighing over 2,205 pounds; Class B, for machines weighing 1,433 and 2,205 pounds; Class C, machines weighing between 818 and 1,432 pounds; Class D, machines weighing between 515 and 818 pounds, and Class E, for machines weighing between 110 and 515 pounds.

In the first three classes the vehicles are to carry at least two passengers seated side by side, the minimum weight to be 132 pounds per passenger, and in cases where the mean weight of passengers does not reach 132 pounds, the deficiency shall be made by means of ballast, the weight of the vehicles in the several classes to be computed in the empty state—that is, without passengers, water, gasoline, stores, tools, spare parts, etc.

Vehicles which draw the energy required for ignition from a device actuated by the motor shall benefit by an allowance of fifteen pounds; the weight of lamps, lamp holders and horns is not to be comprised in said weight of vehicles.

The contest will be held under the rules of the American Automobile Association, and the entrance fee for each event is to be \$5. The entries close with William Wallace, No. 95 Kilby street, April 12. One prize will be awarded in each class, providing there are three or more starters.

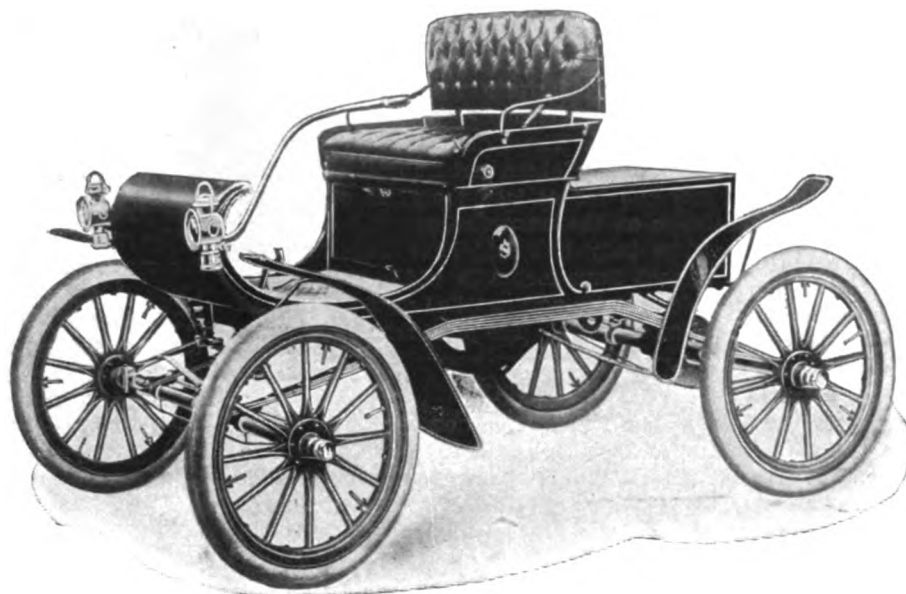
The Artistic Knox Catalogue.

One of the most pretentious and ornate of the spring crop of catalogues is that just issued by the Knox Automobile Company. It is a quarto, with a striking front cover, depicting an outdoor scene redolent of the glad springtime, a Knox touring car having been driven into a field of daisies, while its passengers—a motorist, his wife and three children—are disporting themselves and gathering armfuls of the white and gold flowers.

Detailed descriptions and illustrations of the 1904 Knox models appear on the pages, the tops of the latter being decorated with attractive vignettes of summer and winter scenes, automobiles, of course, figuring prominently in all of them. The catalogue is a model of good printing and smart designing, and a wide departure from the conventional.

*You see them wherever you go;
They go wherever you see them.*

As in all things of superior worth, there are certain features which distinguish an Oldsmobile from all other automobiles.



Oldsmobile Standard Runabout.

PRICE, \$650.00.

Some of these features are:

Its motor equipment, which represents the most advanced ideas and methods in gasoline engine construction. This alone places it in a class by itself.

Then note the ease with which the motor is started from the seat.

Note also the safety device which makes it impossible to start the motor until the spark has been retarded to a point where "back fire" is impossible.

These are but a few of the points we might mention. If you desire further particulars, see our nearest agent, or write direct to



Oldsmobile Light Delivery Wagon.
PRICE, \$850.00.

OLDS MOTOR WORKS, ¹³³² Jefferson Ave., **Detroit, Mich., U.S.A.**

Member of the Association of Licensed Automobile Manufacturers.

COMMERCIAL VEHICLES

Exhaustive Presentation of the Subject by H. P. Maxim—Elaborate Tables Showing Cost of Operation and Maintenance.

What is beyond question the most elaborate and illuminating set of figures covering, in minute detail, the cost of commercial, mechanically-operated vehicles has been compiled by Hiram Percy Maxim, chief engineer of the Electric Vehicle Company, and formed the basis of his lecture delivered before the Automobile Club of America on Tuesday evening, March 22. The lecture was followed with the close attention which such a lucid and comprehensive presentation of the subject invited. It was peculiarly timely in view of the proximity of the club's second commercial contest, which takes place next week.

While embracing in his survey of the commercial vehicle field the four recognized types of motor power, viz., electric, gasoline, steam and gasoline and electric combined, Mr. Maxim devoted nearly all his remarks to the first two classes. In the electric class he took three weights of vehicles as a basis, and with a wealth of figures traced each item of cost, including original price, interest charge, depreciation, operating expense and maintenance charge—the latter having sub-divisions for batteries, tires and general repairs. These tables are based on the use of the standard form of pasted battery, and are supplemented by two other sets of tables devoted to a similar calculation of the cost of vehicles equipped with the Edison battery and a new form of Plante battery, which is termed the Manchester box battery, which is now being exhaustively experimented with. From each of these new batteries a substantial reduction in the cost items is expected.

DIVISIONS IN THE PAPER.

After touching on the general features of the four types, Mr. Maxim took up the electric as fitted with the oxide battery, and lays bare each item of cost, as given in full below. He then proceeded to deal with the vehicle fitted first with the Edison and then with the Manchester box batteries, which will be dealt with in next week's Motor World. Mr. Maxim said:

In the development of the pleasure automobile there have been reduced to practice four different motive power systems. They are the electric, with electric motors and storage batteries; the steam, with steam engines and boiler; the gasoline, with gasoline engines, friction clutch and change gears, and the so-called combination, in which a gasoline engine is coupled to an electric generator, which generates electricity, which is then used in electric motors as in the regular electric. Generally speaking, we may sum them up as follows:

The electric has arrived at what would seem to be a fixed and possibly final type. In

all but the smaller pleasure vehicles it has two series of motors, independently connected, each to one of the driving wheels. The storage battery is carried below the body, between the axles and almost never inside a part of the body. All underlying principles necessary to successful operation in practical service are understood. A degree of certainty and reliability is assured, which enables the vehicle unquestionably to be placed among established transportation apparatus. The highest development unquestionably exists in this country.

GASOLINE VEHICLES ARE PRACTICAL.

In the case of gasoline, while we cannot say that one fixed arrangement has been reached, even in pleasure vehicles, several of the important elements have been reduced to an eminently practical point. The most important of these is the engine. In its best forms the gasoline vehicle engine has finally become a very trustworthy piece of apparatus. All of the principles underlying at least successful operation on the road are understood. For the first time its peculiar advantages for vehicle propulsion are made available. In the general arrangement of the vehicle some believe a final type has been reached, at least in the case of heavy vehicles. This type consists of a self-contained running gear frame, or chassis, which contains the entire power plant, controlling apparatus and running gear. The engines are located in the extreme front end, in a compartment or so-called bonnet, entirely separate from the body carrying space. They are connected through a friction clutch to a change gear device carried below the body. The connection thence to the driving wheels is through a differential.

In pleasure vehicle service a very satisfactory degree of reliability and certainty has been attained, notably in long distance touring. In its best types it is probably no more than fair to class the vehicle among established transportation apparatus, since pleasure touring has come to be classed as a form of legitimate transportation.

In commercial vehicles no approach to anything standard or final has been reached. The highest degree of perfection in the system generally is usually conceded to have been reached in Germany and France, although last year's developments in this country make it a question if an equal degree of perfection has not been reached here.

COST OF MAINTENANCE.

There are in New York City to-day, approximately, three hundred electric wagons and trucks in service. This number of vehicles in operation has naturally brought out many important difficulties, as may be imagined. The most important of these is the cost of maintenance. Very vague, and in most cases entirely erroneous, ideas prevail upon this question. A careful consideration of it at this time and in this place ought to be a good thing. Not only should it serve to clear up some of the error and misunderstanding which exists, but it may also serve to furnish a basis from which to judge the

possibilities of the other motive powers, a very interesting subject at this time and in this connection.

As already pointed out, the modern electric wagon is about uniform in general design. This even extends to the important details. Practically all wagons, for example, use the same kind of a storage battery, and practically all of them use rubber tires. Not all of them, however, use the same amount of storage batteries or the same amount of rubber tires, and it is around these two elements that most of the popular misunderstanding and error exists.

Pains have been taken by the writer recently to go carefully into the general question of cost of maintenance. The object was not so much to determine the entire cost of operation of an automobile wagon and the saving of motive power over horsepower, although this comes out as a natural sequence, but, rather, to determine the relationship between the different elements of maintenance expense as they exist to-day, and to estimate the probable effect of the various improvements we have at present in contemplation. An additional object was to compare the performance of wagons propelled by the other available motive powers, assuming the most recent developments in each were taken advantage of.

SIX DIVISIONS OF EXPENSE.

With this object in view, maintenance expense has been divided into six divisions, as follows: Battery maintenance, tire maintenance, cost of power, general repairs, which include every repair other than those on battery or tires; depreciation, which includes the entire vehicle other than battery and tires, and interest on the investment.

In investigating the conditions existing in actual service many widely varying figures were encountered, as might be imagined would be the case at the present state of the art. An exact figure for any one element is probably an impossible thing to obtain. The best that can be done is to take an average of such observations as are known to be not entirely erratic, and to combine with this a certain amount of estimate based upon experience. The results represent a general performance which we know cannot be far wrong, and which, therefore, should serve very well for a consideration such as the present.

Taking the six elements of maintenance expense, the detailed data from which each has been made up, and which will be seen to contain many interesting facts, are as follows:

Battery Maintenance.—The same kind of storage battery is found in practically all vehicles. It is the oxide, a pasted lead battery made by the Electric Storage Battery Co., of Philadelphia. It represents the highest development of the light weight lead storage battery to date. It is entirely reliable, as far as running is concerned, being virtually free from the old troubles of short circuits, buckled plates and mysterious failures for which storage batteries have been notorious for years. Its separators consist of thin per-

forated sheets of rubber placed against each side of each positive plate, and a thin grooved wooden separator between these and each negative plate. The jar is of hard rubber, and in the latest types has ribs in the bottom which hold the plates some one and three-quarter inches up from the bottom, thus allowing for a large shedding of active material before enough has accumulated to make contact with the plates. The connections between cells have great strength, and ruptures and failures on the street on account of open circuits are very infrequent where anything approaching good care is given. Its one practical disadvantage, aside from cost, resides in its property of gradually shedding its active material.

The performance of this battery seems to be affected strongly, as far as maintenance expense goes, by the number of chargings it has to be given in order to perform the work it is called upon to do. For instance, all 2,000-pound capacity wagons, which is the general size used by department stores and for light express service, seem to have to make about thirty miles a day. All manner of theories and influences have been brought to bear upon this mileage question, but in spite of all thirty miles seems to be about what this size of wagon must average for a day's work if it is to be used to its full possibility.

ONE CHARGE A DAY.

Where a generous battery has been provided it does this with a reasonable factor of safety on one charge. This means, of course, but one charge a day, and a slow and advantageous one at that, on account of most of the night being available for it. On the other hand, where the battery has been scrimped it is found to be impracticable in every day service to always finish up a day's work on one charge. What is called a "boost" is necessary, and is given some time during the day. It consists usually in a short charge, and almost invariably in a high rate one in order to get as much in as is possible in the short time which is usually available. This, of course, unavoidably increases the shedding effect on the positive plates, and, as is true in the case of all apparatus worked too near to its maximum limit, a shorter life results.

In a 2,000-pound capacity wagon for general service a twelve plate MV size exide express battery is a generous one, and since this represents disadvantageous conditions on the score of first cost, and is therefore conservative, it has been taken as the basis for these figures. The price of such a wagon with the usual type of department store body runs about \$2,500 to-day. In ordinary service, and under the care taking conditions existing in the general run of cases, a battery such as has been selected averages somewhere in the vicinity of ninety-five days' work before the shedding of active material, or "mud," as it is called, has accumulated to a point requiring removal. This removal is called its first cleaning.

A cleaning consists of cutting each connecting strap so that individual cells may be sep-

arated and the plates and separators as a unit removed from their rubber jars. When these are removed the jar is also removed and the mud washed out of it. Water from a hose is squirted generously over the element and down between the plates to remove all active material that may be lodged between the plates, and also to clear away all loosened active material from the plates themselves. This is done to each cell. They are then reconnected to each other, or burned, as it is called, and after filling with acid and given a long, slow charge are again ready for service.

THE SECOND CLEANING.

After this cleaning they seem to run for somewhere about seventy-five days more before the mud has again accumulated to a point requiring another cleaning. This time the wooden separators have usually become defective by the acid to a degree which makes it necessary to remove them and to substitute new ones. This requires the separating of the element when it is removed from its jar, and means more labor and a greater breakage of rubber separators and plates than at the first cleaning. It also means the cost of the new wooden separators and the longer so-called "soaking" after the battery has been reassembled again.

When this has been done and the battery goes into service for the third time, it seems to be good for something in the vicinity of sixty more days' work before all of the active material on the positive plates has been shed and their useful life ended. When this point is reached a new set of positives is substituted for the old set, and since this means the handling of the fragile acid soaked wood separators, these also must be substituted by new ones. This adds another element of rubber jar and separator breakage, a result principally of carelessness, but which evidently cannot be controlled, since it is universal.

ONLY NEGATIVE PLATES LEFT.

When the new positive plates and the new wood separators have been installed, the battery starts out again entirely fresh, except for the negative plates. In most cases these seem to hold their own and to show no signs of failure until the next first cleaning. Furthermore, they do not appear to all fail together, as do the positives. At each cleaning it is apparent which are the ones likely to soon go, and the opportunity is taken at these times to remove them and substitute new ones. The death of the negative seems to be, in the ordinary service we are considering, a gradual breaking away of the active material from its support and a general disintegration of the entire plate. An average fully as bad as seems fair to take would appear to be one set of negative plates for every 1.67 sets of positive plates.

This, briefly, represents the detail of existing battery repairs. It amounts to a continual maintenance account, since the battery would under this arrangement be permanently in good running order. As already stated, the conditions named are average, and hence should be conservative. Taking

now a full year's work, the cost per annum for such a battery performance as this amounts to the following:

New positive plates.....	\$155.00
New negative plates.....	84.00
New wood separators.....	26.17
Rubber separators broken in handling	4.55
Rubber jars broken in service and in handling	21.70
Total labor in connection with battery	65.00
Supplies and all other expenses.....	48.50

Total.....\$404.85

The wagon during this time has averaged about thirty miles a day. During the year there seems to be about 288 full working days for such a wagon. This means 8,640 miles for the year, which brings the battery maintenance expense to 4.68 cents a mile. This amounts to \$1.40 a day.

The next item of maintenance expense is that of rubber tires. As in the case of batteries, a wagon on which the tires have been scrimped, and which are therefore working toward their limit all the time, wear out more rapidly than tires of more generous proportions. In a 2,000-pound capacity wagon a 3½-inch tire is a generous one, and since this also works disadvantageously on the score of first cost, and in consequence is conservative, it has been taken as the basis for these figures.

COST OF RUBBER TIRES.

The price of a set of 3½x-inch by 36-inch diameter solid rubber tires, allowing something for scrap salvage, is about \$188. In New-York City such tires can be depended upon for about 9,000 miles service. On the basis of 8,64 miles a year, the cost per annum becomes, for rubber tire maintenance, about \$180. This is 2.09 cents per vehicle mile, or 62.7 cents a day.

The next item is cost of power or charging current. A good figure seems to be something in the vicinity of 14.2 kilowatt hours per charge per day per vehicle. In many cases this charging current is taken from the regular lighting plant with which the stable or store is equipped. Where this is done the cost per kilo watt is very low, being never above 2 cents. When the current is purchased from the street mains, however, it amounts usually to something nearer 4 cents. A uniform figure of 3 cents has been taken for the purpose of this discussion. Upon the basis of 288 working days per year and 14.2 kilowatt hours per day, the total power consumption for the year is 4,000 kilowatt hours, or 5,420 horsepower hours. At 3 cents per kilowatt hour, this comes out at \$122.70 per annum, which is 1.42 cents per vehicle mile.

The next item is general repairs. As stated, this includes repairs of every nature other than those upon batteries and tires. It includes street collisions, side slewing repairs and those resulting from the minor accidents unavoidable in service. Widely varying figures have, of course, been encountered in this also. An average has been taken and a constant arrived at which bears a relation to the price of the wagon, batteries and tires left out. This constant is about 4 per cent,

and is convenient to arrive at the general repair expense of any vehicle, the service of which is about average and the data of which is not obtainable.

In the modern types of wagons, having a thirteen plate battery, 3½-inch tires and a selling price of \$2,500, the price, less batteries and tires, is, allowing for cells only in the case of the battery, \$1,827; 4 per cent of this is \$73.10, which is taken as an average for general repairs per annum for this size wagon. Per vehicle mile, it is 85 cents.

The next item is depreciation: An arbitrary figure of 10 per cent has been taken on the price of the vehicle, less batteries and tires. It is applied uniformly to all vehicles considered, and since the principal purpose of this discussion is the relationship of the different expenses, it is fair. The batteries and tires being constantly maintained, they must, of course, be excluded from depreciation; 10 per cent of \$1,827 makes the depreciation charge \$182.70 per annum, which is 2.12 cents per vehicle mile.

The late item taken is interest on investment: It is here that generous battery and tire allowances have their effect and serve to make the figures high, and therefore conservative. Five per cent is taken on the \$2,500 price, which is \$125 per annum, or 1.45 per vehicle mile.

TABLE OF TOTALS.

The totals may now be taken. They stand as follows:

Battery maintenance.....	\$404.85
Tire maintenance.....	180.00
Cost of charging current.....	122.70
General repairs.....	73.10
Depreciation	182.70
Interest on investment.....	125.00
Total.....	\$1,088.35
(Or 12.61 cents per vehicle mile.)	

It is interesting to note that this amounts to \$3.78 per day, or, if 250 packages per day are delivered, it is 1.51 cents per package.

Before analyzing these expenses, let us look at wagons of a greater load capacity also:

The two heavy wagons which have been selected for this discussion are the three ton and the five ton trucks. The data concerning these are found in practice to be even more difficult to average than that of the small wagons. The less number of vehicles used and the greater variety of the service is the reason. The best that can be done in the way of an average figure is about as follows:

Battery maintenance: A generous battery for a hard working three ton truck is from 40 to 44 cells of 17 plate MV oxide express. For the same reason that a 13 plate battery is taken in the case of the 2,000 pound wagon this 17 plate battery is taken as the basis for this three ton wagon. This battery does a full day's work on one charge with a good factor of safety. The number of day's work is performed before its cleanings should therefore be the same as the battery in the smaller wagon. This seems to be the case, and brings the total life and number of days work at about the same figure. The

battery details per annum work out somewhere about the following:

New positive plates.....	\$217.00
New negative plates.....	117.50
New wood separators.....	36.60
Rubber separators broken in handling	6.37
Rubber jars broken in service and in handling	32.80
Total labor in connection with battery	92.50
Supplies and all other expenses.....	67.80
Total.....	\$570.57

AVERAGE DAY'S WORK.

The average day's work for a three ton truck seems to run somewhere about twenty-four miles. The number of working days per year may be taken as averaging about the same as in the case of the smaller wagon, or 288. This brings the mileage for the year to 6,912, or, approximately, 7,000 miles. The cost per vehicle mile for battery maintenance, works out from this at 8.25 cents. The average load in a three ton truck all day long seems to be somewhere in the neighborhood of two tons in ordinary service. The yearly ton miles is therefore 13,824, which brings the battery maintenance out at 4.12 cents per ton mile.

Tire maintenance: A generous rubber tire for a three ton truck is a 5-inch. Replacing a 5-inch tire on both front and rear wheels costs about \$350 for tires. The life in average service is something in the vicinity of 8,000 miles. The yearly mileage being 6,912 for the vehicle, the cost per annum for tires works out at about \$303, which brings the vehicle mile to 4.37 cents and the ton mile to 2.18 cents.

The next is charging current: As near as can be averaged, a day's charge for a three ton truck is something like 20.5 kilowatt hours. This brings the power for the year to 5,904 kilo watt hours. At the rate selected, 3 cents per kilowatt hour, the cost per annum for charging current works out at \$177.12, which is 2.57 cents for the vehicle mile and 1.29 cents for the ton mile.

4 PER CENT FOR REPAIRS.

The next is general repairs: Taking the 4 per cent figure, which is about as fair for this truck as for the smaller one, it is applied to the truck price, less tires and battery. The price of a complete three ton electric truck averages to-day around \$3,700. Batteries and tires taken out, leaves \$2,672. Applying the 4 per cent brings the per annum charge for general repairs to \$106.88, which, for the vehicle mile, is 1.54 cents and for the ton mile .77 cents.

The next item is depreciation: Ten per cent on the price, less batteries and tires, becomes \$267.20 per annum, which is 3.86 cents per mile and 1.93 cents per ton mile, quite an important item. In the case of the interest on investment, 5 per cent on the price of the vehicle brings the per annum charge at \$185, which is 2.67 cents per vehicle mile and 1.39 cents per ton mile. The total of these three ton figures, then, is something as follows:

Battery maintenance.....	\$570.57
Tire maintenance.....	303.00

Cost of charging current.....	177.12
General repairs.....	106.88
Depreciation	267.20
Interest	185.00

Total.....\$1,609.77
(Or 23.2 cents per vehicle mile, or 11.6 cents for every ton mile, or \$5.57 per day, which is a good figure from which to make comparisons.)

The five ton truck is now left. This is the largest of all the electric automobiles which have been produced. In it a great many new difficulties are met with which do not appear in the smaller and lighter wagons. The cause is the much greater weight. The weight of a five ton truck with its load is something of considerable magnitude when it comes to steering and driving it in ordinary street traffic. Physical exertion on the part of the driver and no little skill are needed for the steering alone. All of these things put together have caused more complaint to be made in the case of this vehicle than in any of the others, and more misunderstanding and error surround it also. Unquestionably the principal cause of this has been that the majority of five ton trucks which have been placed in service have had inadequate batteries, tires and motor. In neither of the other vehicles discussed does scrimping of these important elements have such serious effect. An endeavor has been made to confine the figures given her to those vehicles which have generous tires, motor and battery proportions.

BATTERY FOR 5-TON TRUCK.

A generous battery for a five ton truck is forty-four cells of 19 plate MV oxide express. Such a battery is usually able to manage a full day's work on one charge, and, as such, requires cleanings on about the same basis as the other vehicles which have but one charging a day. The battery maintenance expenses per annum on this basis may be taken as something about as follows:

New positive plates.....	\$244.00
New negative plates.....	132.00
New wood separators.....	41.00
Rubber separators broken in handling	7.15
Rubber jars broken in service and in handling	35.00
Total labor in connection with battery	102.00
Supplies and all other expenses.....	75.00

Total.....\$636.15

The average day's work for a five ton truck seems to be about twenty miles. The number of working day's per year, as in the case of the other wagons, may be taken as about 288. This brings the mileage run in one year to 5,760, making the battery maintenance 11.05 cents per vehicle mile and 3.15 cents per tone mile, since the average load of a five ton truck all day long seems to be something about three and one-half tons. It is interesting to see that this means the total accomplishment in a year of 20,160 ton miles.

In the case of the tires, a generous rubber tire for a five ton truck is 7-inch on the rear driving tires and 6-inch on the front tires. These have been found to give very satisfactory results even in the severe service of the five ton truck, and it may be mentioned

here that this service is extraordinarily severe, as compared with that of smaller vehicles on account of five ton trucks being principally used in downtown districts, where pavements are very bad.

These tires cost somewhere about \$164 per set. Their life in average service is something in the vicinity of 7,680 miles, as near as an average figure can be taken. The yearly mileage being 5,760, the cost per annum for tire maintenance works out at \$348, or 6.05 cents for every mile run and 1.72 cents for every ton hauled over one mile of distance.

The charging current for a day's charge is something like 21.6 kilowatt hours on an average. This is 6,220 kilowatt hours, which at 3 cents, brings the annual charge to \$186.60, which means 3.24 cents for power for every mile run and .92 cents for every ton hauled a mile.

On the score of general repairs, the 4 per cent figure holds as well as on the smaller vehicles. The price of a complete five ton truck to-day approximates \$4,000. Batteries and tires taken out, leave \$2,785. This amounts to \$111.40 per annum, or 1.93 cents per mile run or .54 cents per ton mile.

In the case of depreciation, the 10 per cent constant amounts to an annual charge of \$278.50, or 4.84 cents per mile run or 1.38 cents per ton mile. The interest, at the 5 per cent figure, is no less than \$200 per annum, which is 3.46 cents per vehicle mile and .99 cents per ton mile. These totalled appear as follows.

Battery maintenance.....	\$636.15
Tire maintenance.....	348.00
Cost of charging current.....	186.60
General repairs.....	111.40
Depreciation.....	278.50
Interest.....	200.00

Total.....\$1,760.65

(Or 30.57 cents for every mile run with average load on board, or 8.75 cents for every ton which is hauled a mile. It is interesting to note that this totals \$6.11 a day.)

Now for some convenient way to get a comparative judgment of these different figures. In order that they may all be seen at once, they have been tabulated, as shown in table No. 1.

TABLE NO. 1.

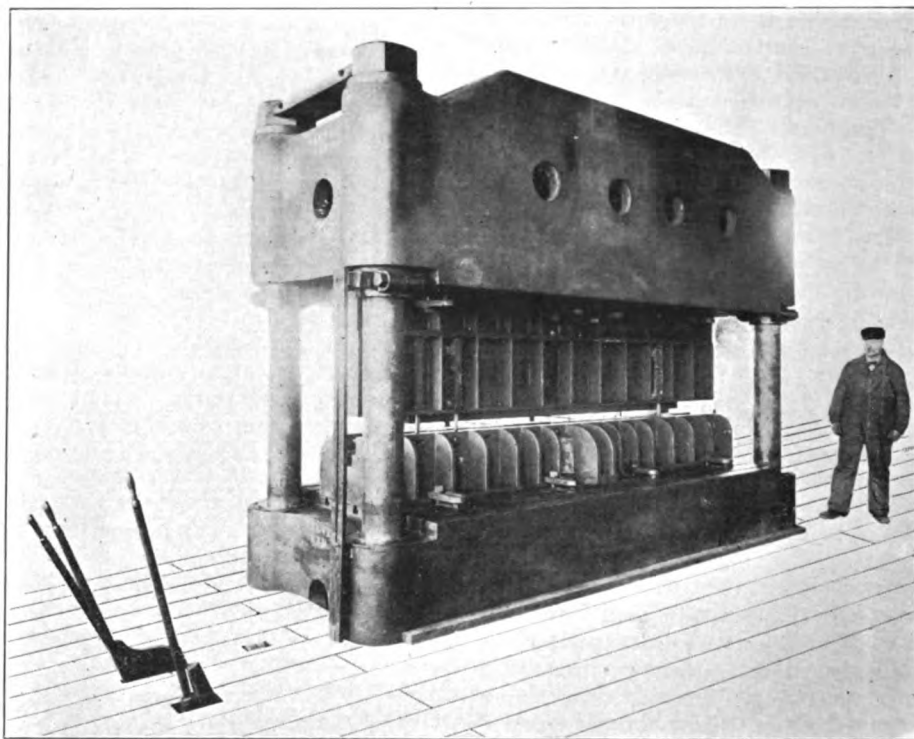
Relation between elements of cost of maintenance in existing electric vehicles:

	1 ton wagon.		3 ton wagon.		5 ton wagon.	
Elements	mi.	Per cent.	mi.	Per cent.	mi.	Per cent.
Battery	4.68	37.0	8.25	35.4	11.05	35.5
Tires	2.09	16.6	4.37	18.8	6.05	20.0
Depreciation	2.12	16.8	3.86	16.6	4.84	16.0
Interest	1.45	11.5	2.67	11.5	3.46	11.4
Chg. current	1.42	11.4	2.57	11.0	3.24	10.7
Repairs	.85	6.7	1.54	6.7	1.93	6.4
Totals	\$3.78	per day,	\$5.58	per day,		

From this table we are able to see that a general average of the majority of the vehicles of up-to-date proportions in actual service to-day, have six important items in their operating expenses which amount to quite a considerable sum of money. This brings us unavoidably to a comparison with the corresponding costs when horse-power is used. While it is not intended to dwell upon this matter, it may be well to touch upon it while passing.

Mammoth Press for Automobile Frames.

Recognizing both the merits and the increased demand for automobile frames constructed of pressed steel the Cleveland Car Specialty Co., Cleveland, O., of which Geo. L. Weiss is general manager, has added to its equipment for work of this description a new 650-ton hydraulic press, specially designed to turn out complete automobile frames. An idea of the immensity of this powerful press may be obtained from the illustration. With it the largest frames can be pressed at one operation, thus insuring the making of a frame that is straight and true and not warped, a result that cannot be obtained on smaller presses where it is necessary to make two or three operations before the frame is completed.



For the making of automobiles frames from cold rolled steel, the hydraulic press which is comparatively slow in its movements, is pre-eminently suited to the requirements, as it gives the metal time to flow, so that the resulting product is uniform in character and free from internal strains and stresses.

The use of pressed steel for complete automobiles frames is claimed by advanced designers to be the only solution of the problem of combining a maximum of strength with a minimum of weight. No combination of riveted plates and angles for the side frames and cross braces, it is claimed, can be made of the same strength as properly designed pressed steel parts, without greatly increasing the weight. With the use of pressed steel the cross section of the parts imposed upon them, giving depth where needed and decreasing this depth as the stresses become less, thus utilizing all of

the metal to the very best advantage, and this is not possible with commercial shapes. However, like all new products, it has not hitherto been easy to obtain the perfect work and extreme accuracy required by the present day automobile manufacturer.

Besides the big press referred to, the Cleveland Company has a large hydraulic equipment, including a special riveter for the riveting up of complete frames, and also large plate shears for the cutting of the stock to the exact shape required. The equipment is entirely new, only having been completed last December, but the company have already finished considerable automobile work and where accuracy and quality are demanded are able to guarantee perfect satisfaction.

Are Sole Agents for Darracqs.

The American Darracq Co., of this city, has been much annoyed by statements and claims made by a person styling himself "the German and French Automobile Industry. Engineer, S. De Feher," and trading in Philadelphia, who has been advertising that he will sell Darracq cars at cut prices. The American Darracq Co. have in their possession letters from the French and German Darracq houses, branding these statements as fabrications, and adding that they have no dealings with De Feher and that the American Darracq Co. are the only authorized agents in this country for Darracq cars. These letters the local concern has reproduced in a small folder, which is being circulated in this country.

On April 1 Ralph Rogers will open a sales-room and garage at Ottumwa, Ia. He will handle the Rambler and Mitchell lines.

SPRING HIGHWAY REPAIRS

Especially Necessary After the Present Exceptional Severe Winter—Rolling and Raking.

Neglect is said to have ruined more roads than use, and at no season of the year are the highways more apt to be neglected or more in need of repair than in the spring. The past winter has been such an exceptionally severe one, and the frost has penetrated the ground for so many feet, that an unusual amount of damage will surely be done unless road supervisors and repairers exercise great care and unusual diligence in repairing.

Highway Commissioner Macdonald of Connecticut is awake to the situation, and has sent to the selectmen of the towns of the State a circular letter giving some suggestions and advice regarding the care of roads at this season. He says:

"We have had a long and very tedious winter, which goes without saying. Since the last week in December up to the time of writing this letter the roads of the State have been almost completely covered with snow, and when the snow had disappeared even all our macadam roads were icebound. This state of affairs has required the shoeing of horses sharply, and the calks have had a tendency to loosen up some of the macadam surface. In addition to this enemy to a perfect road we have, of course, the usual state of affairs, the uplift of the frost, which has a tendency to disintegrate and disturb somewhat the surface of the road.

"I have found it a very good practice in the early spring immediately on the roads becoming bare to rake off whatever stones have become loosened, through whatever cause, and immediately roll the surface. This treatment, however, is not to be done until after the frost has completely left the ground, so that we may have a reasonable degree of surety that after the rolling has become an accomplished fact the roads will remain in the compact condition left by the roller.

"All shoulders should be pared down sufficiently to allow an uninterrupted flow of the water from the crown of the road directly to the gutters. All culverts should be opened up as quickly as possible, so that whatever the spring may offer in the way of constant rains, which we are very liable to have, will in no way injure the road. Gutters should be cleaned out and a general overhauling take place. It may be possible, however, that we cannot use the road scraper to advantage or with profit immediately, but it would be certainly a wise plan to rake off all stones that have worked up through the action of the frost or by the assistance of travel in any way and immediately roll the road.

"In addition to this treatment it would be well to add whatever screenings are neces-

sary to protect the surface of the road. One of the most intelligent indications of repair need is when the stones show bare on the surface. Immediately a cushion of some kind should be provided to interrupt the impact of the hoof and the destructive influence of the wheel coming in contact with the bare stone surface.

"These may appear little matters, and to those who are not students in the art of road building it might suggest that such things could be put off until the general road repairing time; but delays are always dangerous; the expenditure of a few dollars immediately on the frost leaving the ground will remove the necessity for the expenditure of perhaps hundreds of dollars later on in the summer months.

"The absence of rolling a macadam road in the early spring assists to its destruction by leaving the road very porous and open in its construction, which is always fatal in dry weather. You will find very beneficial results coming from the simple treatment I have suggested. On newly built roads, those which were finished last year, a sufficient number of screenings were left by the several contractors to accomplish any necessary repair without any expense to the town except that of placing the screenings upon the road.

"It will not be necessary after the application of the screenings to do any extensive rolling; the principal part of the rolling should be done prior to the application of the screenings. If any rolling should be done afterward it should be done at the time the shoulders have been pared down, and make a general rolling of the road proper and the shoulders at the same time.

"May I invite your attention to these matters thus early, so that the possibility of a large outlay may be avoided in the future repair of your macadam system?"

Benson Talks on Tires.

"Rubber and Tires" was the subject discussed at the smoker of the Rhode Island Automobile Club last week, the talk of the evening being made by Ernest R. Benson, of the Boston branch of the Hartford Rubber Works Co. He thoroughly enlightened the members on the subject, which is of such a vital interest to automobilists. He also answered a number of questions relating to the usages and repairs of tires, and with exhibits showed the various stages of rubber in the process of manufacture.

Philadelphia Club Chooses Governors.

The Automobile Club of Philadelphia met last week and elected the following Board of Governors: J. Emlen Smith, Henry G. Morris, F. C. Lewin, Isaac Starr, Jr.; H. Bartol Brazier, Louis J. Kolb and Ellis Ames Ballard. After drawing lots it was announced that the first three would serve for two years and the other four for one year. A Nominating Committee was also chosen, consisting of Howard Longstreth, A. N. Chandler and A. D. Chadbourne.

AN OBJECT LESSON

Indiana Farmers Find That Mail Deliveries Must Wait on Improved Highways.

Experience in rural mail delivery in the vicinity of Clay City, Ind., two routes having been established last year, going into effect September 15, has demonstrated the impracticability of the system in advance of good roads. To maintain the regular daily delivery the year round on the dirt roads will require an appropriation practically double the present salary schedule, says a dispatch from that town.

It is generally agreed that there is no horse, nor team of horses, that will stand the continuous service for a full year. Men of judgment insist that these routes cannot be contracted for at any lower figure than \$1,200 a year, and it is a question as to whether it would not be the better policy to expend this appropriation on the improvement of the roads rather than on deliveries of mail in advance of passable condition of road routes.

As the sequel to but six months of experience, it is said that five horses are necessary to maintain the service—one for the season of dry, smooth roads for the summer, and two teams for the winter to alternate daily. These routes will now go begging for some one to assume and perform the service. It is an open question whether an automobile service would not solve the problem. The motor vehicle could do quite as well as horse drawn ones in bad weather, and completely eclipse them when the roads are in their normal condition.

Why he Talks About Roads.

In the case of nine motorists out of ten the only lasting remembrance, the sole recollection that sticks in their minds of all the tours they have taken, is the condition of the various roads—at least this is the impression one gets from talking with enthusiasts, remarks an observer. If you ask them to describe a tour they merely reel off a catalogue-like statement regarding the various distances between the main towns through which their route lay, and a remarkably minute account of the condition of every road over which they passed. Scenery, climate, peculiarities of towns through which they passed or people encountered are never mentioned. Even any adventures or experiences they have had are inseparably connected with the condition of the roadbed. This is more particularly the case with men.

This merely shows why motorists take such an interest in improved roads. A good and a bad road represent the difference between pleasant going at a fair rate of speed and uncomfortable progress, slow and punctuated with jolts and jars. Small wonder that they talk about the roads, when it is remembered that the overwhelming majority of them are bad.

In-com'pa-ra-ble, excellent beyond comparison; unapproachable in kind, character or degree; matchless in design and workmanship.

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CLEVELAND, OHIO



The Hodgson Speed Indicator

Accurately denotes the momentary speed of the automobile. It is a great invention and every owner of a motor car requires it. Made for models of all leading automobiles.



Absolutely the only gearing that will not wear out of adjustment.

The dial facing the operator shows the exact rate of speed. The side dials show black when car is going less than four miles per hour, then white up to 10 miles, then green up to 20 miles, then red. The divisions are made to suit local Ordinances. The public thus can see from either side of street day or night, whether Ordinance is being violated, saving operator many an expensive law suit. When color flashes are not desired nor made compulsory, the ends of Indicator are blank and still the Chauffeur reads by day or night the speed from dial facing him. Patented in U. S. and Europe. Adds more to appearance of car than most expensive lamp.



Send for our booklet "HOW FAST?"

A discount of 20 per cent. will be allowed on all orders placed prior to May 1st next.

Address all communications to E. J. HODGSON, Secretary

The SPEED INDICATOR CO., 415 N. W. Building, Minneapolis, Minn.

TRY US FOR Pressed Steel Frames.

We are making them from the Highest Grade of Cold Rolled Steel under the most perfect conditions of manufacture.

Latest types of Hydraulic Presses and Rivetters give us unsurpassed facilities for making pressed steel frames in large quantities. Where accuracy and quality are considered we guarantee satisfaction.

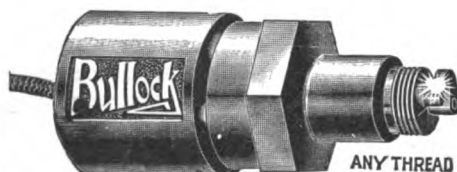
NOW is the time to consider 1905 requirements.

Send us your drawings and get our prices.

Cleveland Car Specialty Co.,

Case Ave. and Lake St., Cleveland, Ohio.

*"Beware of the Dog" is a sign we oft see;
"Get Wise" and the Dog has no terrors for thee.
Stop and think for a while how the sweet buzzing sound
Of the "juice"-eating coil will appease the poor hound.
We repeat, once again your memory to jog,
"Use a BULLOCK IGNITOR—Throw your coil to the Dog."*



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CLEVELAND, OHIO.

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**THE
Bullock
IGNITOR**

LOSS OF COMPRESSION

How to Test it by Means of a Pressure Gauge— Hard Tests Unsatisfactory

The testing of the compression is a somewhat difficult operation to obtain satisfactory results, as so many elements enter into the conditions. These we will touch on after describing how compression may be tested, says the Autocar.

The piston should be freed in the cylinder by injecting a small quantity of gasolene, or for this purpose kerosene is possibly much superior, on account of its having some lubricating properties, as well as being a cleansing medium. The starting handle should be put into engagement, and should be revolved until resistance is felt on one upward stroke only. It is by the amount of resistance which is felt on the starting handle that the amount of compression in the engine may be judged.

In order to obtain a correct idea of the amount of compression there is in the cylinder, a slow steady pull should be given to the starting handle—not a sharp quick jerk such as is necessary in the starting operation. In order to free the valves and to get the engine as nearly as possible into its free working condition, two or three sharp revolutions by means of the starting handle may be given to the engine, after which the compression stroke should be felt, and then a long steady pull on the handle taken, from which to judge the amount of compression. In doing this, the operator can steady himself by placing the left hand on the front part of the dumb iron, while with the right hand he grasps the starting handle. The amount of compression in the cylinder is judged by the length of time occupied in overcoming the resistance. Incidentally, the power of the operator is a factor which also enters into one's judgment. For a two, three, or four cylinder engine, it is necessary that each cylinder should be tested independently. This is more easily done by inserting between the valve lifter and the valve stem on the exhaust side two copper coins, which will give a sufficient lift to the valve to prevent any resistance from those cylinders which are not being tested beyond the normal frictional resistance. By this means each cylinder may be tested separately.

Another method is to remove the sparking plugs. This may possibly in many instances be a more simple operation than that previously described. We said before that many conditions entered into the judgment of the amount of compression, as usually tested, so that one might easily misjudge the length of time which elapses between the compression being felt and its release by depending merely on the physical strength of the operator. The latter is a very essential point. For what to a moderately muscled man may seem a high compression would to a man in good training be

a mere nothing. So that, altogether, the testing of compression by these methods is at best very unsatisfactory.

The only satisfactory method of ascertaining the correct compression in the cylinder is to have an adapter made to fit into the sparking plug orifice, this attachment carrying a small pressure gauge such as is used for tire inflation, the dial of which is marked up to 100 pounds per square inch. This should be sufficiently high for most engines. The gauge itself should be screwed into the adapter, so that the extra amount of compression space obtained by the use of the device may be as little as possible. It only now remains for the gauge to be screwed into the cylinder, and then for the operator to watch the highest point to which the index registers, in order to obtain the exact amount of compression of the particular cylinder under test. This figure, of course, will not correctly indicate the amount of compression which will be present when the engine is actually working. In this case, it will be higher than that indicated.

Incidentally, we may mention that suction may also be tested in a similar manner by the fitting of a gauge, the dial of which is marked below zero, and not above as with the compression indicator. No hard and fast line can be given as to the amount of compression which should be registered, for this varies with many engines according to the speed at which they run, and the diameters of their flywheels to a certain extent. The average compression, however, is about 75 pounds to the square inch. The most satisfactory and practical way of finding out the condition of one's engine is to test the compression when the engine is in good going order, and to make a record of the compression and suction (if tested), and to use these as standards of comparison when the engine is out of order and need attention, in the manner already indicated. Measures must then be taken, previously described, to restore the engine to its normal condition of working.

Causes of Loss of Power.

Should there be a loss of power in the engine the following points should be examined for the cause: leakage at either exhaust or inlet valves, sparking plug or piston rings, weak accumulators, dirty sparking plug, imperfect contact at the contact breaker caused by a weak spring in the contact arm, or by carbonized oil on the fibre disk and contact pieces or burning of the platins on the trembler of the induction coil. The latter may be cleaned by removing the screw and trembler blade and dressing up the contact pieces perfectly square to insure good contact when replaced. Put on the switch, put the contact breaker in position to close the circuit, then adjust the screw to the blade till the most violent vibration of the trembler is attained. Lock the screw in position by means of the locking nut. When making this adjustment it is most important that the sparking plug wire should be connected to the plug and the plug to the cylinder; should this be neglected there is every probability of the coil being injured by burning.

GRINDING VALVES

A Wrong and a Right Way—Importance of Keeping Emery out of the Cylinder.

In order to re-establish the compression when the valves are found to be defective, these should be resealed by grinding with the aid of oil and flour emery. Great care should be exercised in carrying out this operation. Advice is sometimes given to make a paste of flour emery and oil, to place this on the angular face of the valve and then, replacing the valve stem in its guide, to begin grinding operations. This treatment is altogether too severe, unless it be resorted to when a valve is in such a bad condition as almost to necessitate its being refaced in the lathe. A preferable manner is to lubricate the face of the valve, and then, dipping an oily finger into the flour emery, transfer as much of the abrasive material as adheres to the finger to the face of the valve. This provides quite sufficient emery to begin operations with.

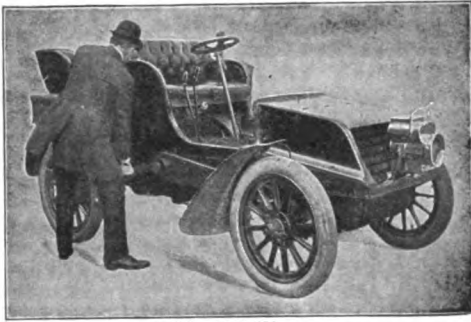
The valve should be turned on its seat—by the use of a screwdriver or a special tool provided by the makers—either with a circular or half-circular motion, light pressure being brought to bear upon it at the same time. At frequent intervals the valve should be lifted from its seat to prevent any hard particles which may possibly be in the emery causing rings to be cut on the face of the valve and its seat. It will always be found after lifting the valve that a new cut is on the emery, and this will gradually wear away until it appears to have lost its cutting edge, but the lifting of the valve will again prove that this is not the case.

During the whole of the grinding in operations plenty of oil should be used, and when the condition of the valve face and its seat is perfect (this being indicated by a bright and equal surface extending over the whole face of the valve) the seat of the valve itself should be well washed with gasolene, great care being taken that no particles of emery are washed into the cylinder. If this should happen, it is very possible that the piston and the cylinder will become badly cut by such emery, and the foundation will be laid of a lot of trouble, and there will be a permanent loss of power through bad compression.

How to Lubricate.

Lubrication is one of the most important points in the running of a motor; neglect on this score may result in very serious consequences, most probably a total breakdown of the engine. Ordinary gas engine oil should be avoided, being quite unsuitable for high speed engines. Oil of a very high flash point and free from deposit at high temperatures is the most suitable. With the pump system of lubrication it is preferable to oil often and in small quantities. With the drop feed system the lubricators should be set to give from five to six drops per minute for each cylinder.

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The Old Way.

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The operator mounts the car, pulls a small valve lever, throws in the clutch, and the car moves off.

Write us what car you use, and we will tell you all about it.



The New Way.

The STEEL BALL COMPANY, No. 832 Austin Ave., Chicago, Illinois.

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READY FOR DELIVERY:

“Mercedes,” “Bayard-Clement,”

“de Dietrich, Turgat-Méry,”

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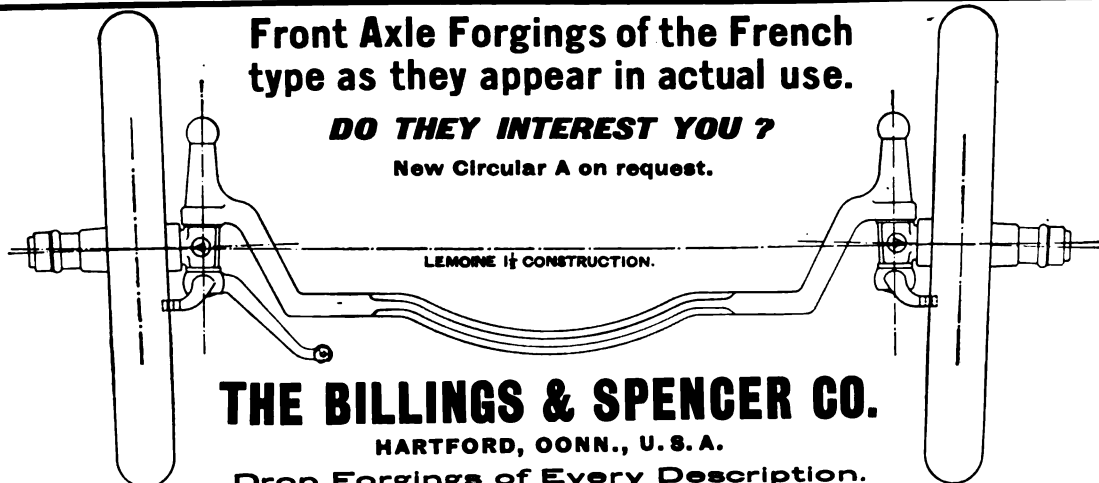
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THE GERMAN AND FRENCH AUTOMOBILE INDUSTRY,

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Forgings
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Front Axle Forgings of the French type as they appear in actual use.

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Drop Forgings of Every Description.

These
Forgings
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Touring Cars
from
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The Week's Patents.

754,909. Storage Battery. Martin C. Burt, Chicago, Ill. Filed August 13, 1903. Serial No. 169,348. (No model.)

Claim—1. In a battery cell, positive and negative plates, in combination with cooling instrumentalities comprising an air conductor arranged between said plates, and means for forcing air through said conductor.

754,975. Mechanically Propelled Vehicle. David M. Dearing, Jackson, Mich. Filed February 19, 1903. Serial No. 144,115. (No model.)

Claim—1. Propelling mechanism, comprising a rock shaft, a driving element fixed thereto, a rotating shaft or axle, ratchet wheels fixed thereto, gear segments of different radii fixed to the rock shaft and reciprocating simultaneously in an arcuate path, a gear wheel loose on the rotating shaft and in direct mesh with the larger segment and provided with a vibratory pawl engaging one of said ratchet wheels, an idler meshing with the smaller segment, and a second gear wheel loose on the rotating shaft and meshing with said idler and provided with a vibratory pawl engaging the other ratchet wheel, the teeth of the ratchet wheels being so disposed as to impart continued forward motion to the rotary shaft upon the vibration of the said driving element and the reciprocation of said gear segments, substantially as described.

754,996. Motor Sled. Thorgils Halldorson, Mountain, N. D. Filed June 10, 1903. Serial No. 160,790. (No model.)

Claim—1. The combination with a sled of a crank shaft having cranks disposed one at each side of each runner of the sled, a lever pivoted upon each runner, a pair of guide rollers supported by each of the levers, propelling legs having guide frames engaged each with a guide roller, each of the legs being connected to a crank of the crank shaft, and means for holding each of the levers yieldably with the connected propelling legs in active positions.

755,074. Double Carburetter for Explosive Engines. Thomas L. Sturtevant, Quincy, and Thomas J. Sturtevant, Wellesley, Mass. Filed March 3, 1903. Serial No. 145,959. (No model.)

Claim—1. Fuel supplying apparatus for gas engines, comprising the combination with a main carburetter having a fuel inlet, and a throttle valve controlling said fuel inlet, whereby the amount of fuel supplied from said main carburetter may be varied or completely shut off; of an auxiliary carburetter co-operating with said main carburetter, said auxiliary carburetter having an open fuel outlet, whereby a desired minimum fuel supply for the engine is afforded.

755,087. Positioning Apparatus for Vehicles. George A. Ward, New York, N. Y., assignor to Electric Vehicle Company, Jersey City, N. J., a corporation of New Jersey. Filed December 23, 1902. Serial No. 136,317. (No model.)

Claim—1. In a positioning apparatus for vehicles, the combination of freely swinging platforms suspended from above by upwardly extending members and forming a table adapted to receive a vehicle, and a guide frame co-operating therewith to centre the vehicle with respect to a fixed point outside the table.

755,093. Vaporizer for Hydrocarbon Engines. Norman A. Wright, Pontiac, Mich. Filed July 1, 1903. Serial No. 163,843. (No model.)

Claim—1. In a vaporizer, the combination with a casing provided with an intake port and ports communicating with the cylinder and crank case of the engine, of a series of perforated plates in the casing between the intake port and the port communicating with the crank case of the engine, whereby upon the upstroke of the piston liquid fuel will be drawn through the intake port of the casing and through the plates into the crank case, and upon the downstroke of the piston will be forced through the casing into the cylinder.

755,131. Wheel for Vehicles. Henry S. Hele-Shaw, Liverpool, and Robert B. Helliwell, Waterloo, England. Filed April 10, 1903. Serial No. 152,059. (No model.)

Claim—1. In a wheel, in combination with the rim and the hub; two series of sectors, splayed outwardly on opposite sides of the medial plane of the wheel from rim to hub and connecting the rim to the hub, the sectors of each series abutting against each other throughout the entire extent of the wheel, and means for expanding the peripheries of the sectors by drawing the central portions thereof together; substantially as described.

755,142. Storage Battery Construction. Simon Lake, Bridgeport, Conn. Filed December 17, 1903. Serial No. 185,465. (No model.)

Claim—1. A storage battery cell comprising series of plates of opposite polarity, and sectional bus bars built up of component members permanently connected with the plates of like polarity with interposed distance pieces.

755,147. Vehicle Tire. Paul W. Litchfield, Akron, Ohio. Filed June 8, 1903. Serial No. 160,507. (No model.)

Claim—1. The combination with a felly having a rigid band or rim extending around the periphery thereof, centrally disposed and of less width than the width of the felly and provided with outwardly flaring side walls, of a tire comprising an outer casing split at its inner periphery and formed with attaching portions to fit on each side of the rim and project beyond the sides of the felly, an inner inflatable casing adapted to seat in the space between said flaring wall when inflated, and clamping plates detachably secured to the respective sides of the felly for compressing said attaching portions of the outer casing and forcing them into contact with the flaring walls of the rim.

755,202. Flash Boiler. George E. Whitney, Bridgeport, Conn., assignor to Whitney Motor Wagon Company, Kittery, Me., a corporation of Maine. Filed December 20, 1902. Serial No. 130,010. (No model.)

Claim—1. A steam generator containing a series of connected superposed generating coils, each of uniform bore throughout, at least one of said coils having a portion higher than another portion which is nearer the inlet end thereof.

755,310. Protector for Pneumatic Tires. Leon Niore, Chateau Renault, France. Filed December 7, 1903. Serial No. 184,218. (No model.)

Claim—A protector for pneumatic tires of all kinds, comprising a leather band shaped according to the form of the tire, and which is attached to the rim by lugs provided with hooks which engage with the same or in any other suitable manner, said band being combined with a tread, also of leather, firmly attached to the former by means of rivets, the internal head of which is embedded in the india rubber of the pneumatic tire, the second band being armed or shod by means of riveted nails substantially as described.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.

WANTED—To tell you how to mend holes in tires; "Stitch-in-Time," Topeka, Kansas.

SEND five cents for our illustrated catalogue of second-hand automobiles. Big variety, low figures. MISSISSIPPI VALLEY AUTOMOBILE CO., 3927-3939 Olive St., St. Louis, Mo.

AUTO 'BUSSES—Three 16 passenger Steam Busses and two 9 H. P. Delivery Wagons. First class condition. Moderate prices. Easy terms. Write for particulars. PEOPLES RAPID TRANSIT CO., Olneyville Sq., Providence, R. I.

FOR SALE—Franklin car, new in October, with Tonneau; run less than 500 miles. Owner bought touring car. Will demonstrate. C. W. H., The Motor World.

FOR SALE—1903 Union; new last June; sold through no fault, want 1904 Model. Address PETER WOLL & SONS FEATHER CO., Philadelphia.

FOR SALE—Automobile bodies (about 30) made of finest whitewood, some in the white and some partly finished, which we are unable to use, as we are now equipping our cars with aluminum bodies. You can have them at your own price, as we wish to close them out immediately. Send for illustrations and descriptions. Address MATHESON MOTOR CAR CO., LTD., Grand Rapids, Mich.

FOR SALE—1903 Knox; painted red; with top; in excellent running condition. At bargain price. C. W. H., The Motor World.

WANTED—Position as chauffeur, can handle all makes of gasoline cars. CARL B. KNAPP, 207 W. Canton St., Boston, Mass.

SPLENDID BARGAINS—1903 Winton touring car 1903 Waterless Knox. 1902 Knox. 1902 Winton phaeton, several Oldsmobiles and steam runabouts; two second hand electric runabouts. Write us fully regarding your wants, and we will try to give you an interesting proposition. ADAMS & HART, Grand Rapids, Mich.

\$125 Buys my model 18 Thomas Touring Car, fully equipped and in perfect condition; must sell at once and for cash. KARL A. HINIG, Coshocton, Ohio.

FOR SALE—Winton 1903 model, \$1,500; in first-class condition; run only two months; selling because owners are abroad. Write to CHAS. A. HURLEY, Item Bldg., Lynn, Mass.

ORIENT Buckboard, 1903 model, in good order; \$250. JAMES WATSON, Montpelier, Ind.

AUCTION.

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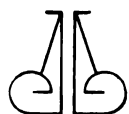
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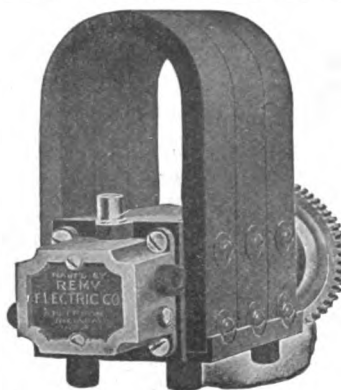
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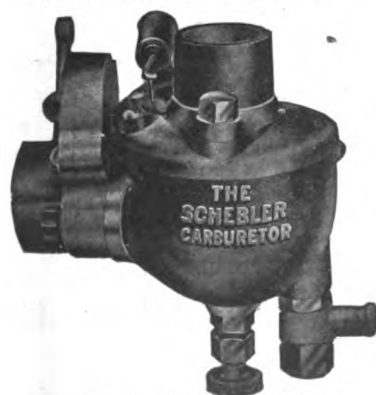


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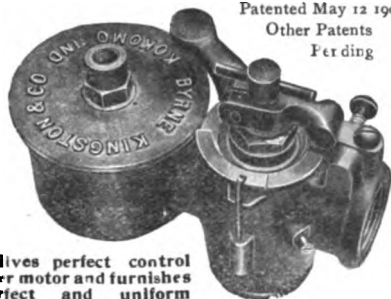
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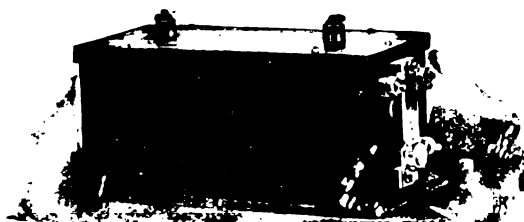
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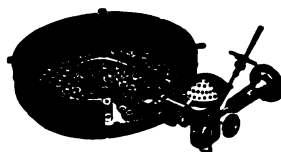


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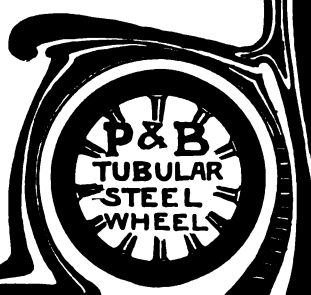
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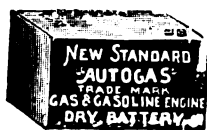
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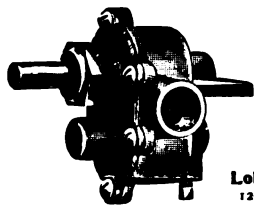


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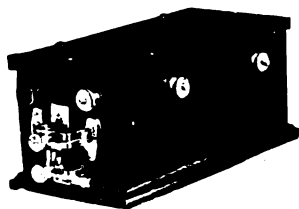
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Yankee Spark Plug, \$2.00

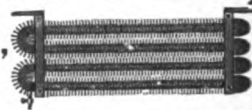
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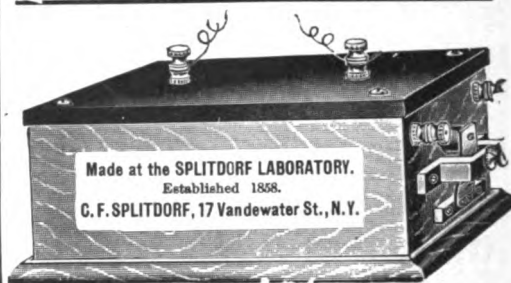
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SOME of our competitors try to make Cadillac dealers believe that we lack sufficient horse-power, and that we only "claim 6½ horse-power." It is true we rated our 1903 engine at but 6½ horse-power. We had an object in doing this. We knew we had sufficient horse-power to drive a Cadillac over any road and up any hill that any automobile would go. No Cadillac engine was sent out of our engine factory that would not test up to 8½ horse-power actual brake test after one hour's run on the block.

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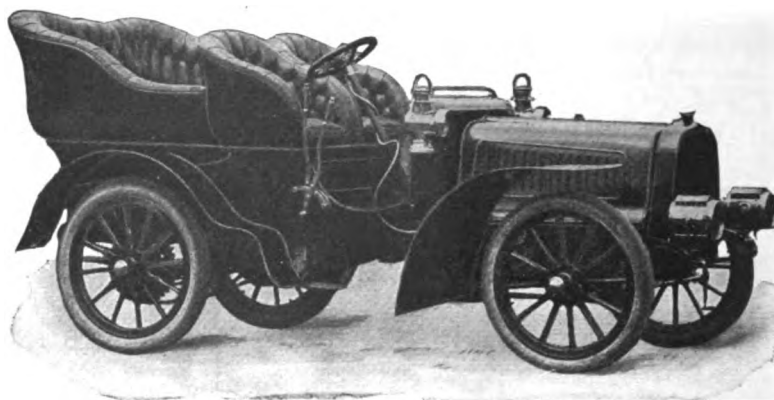
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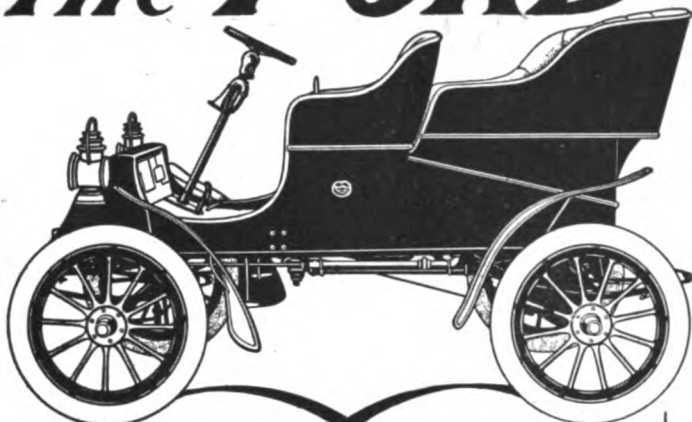
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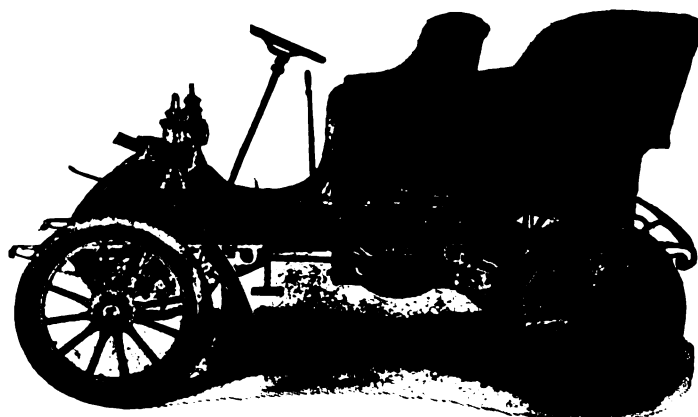
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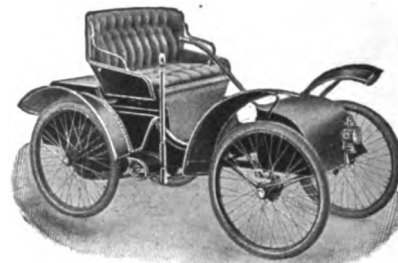
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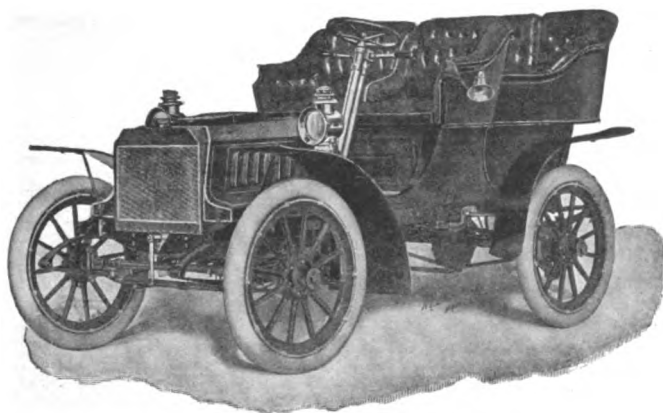
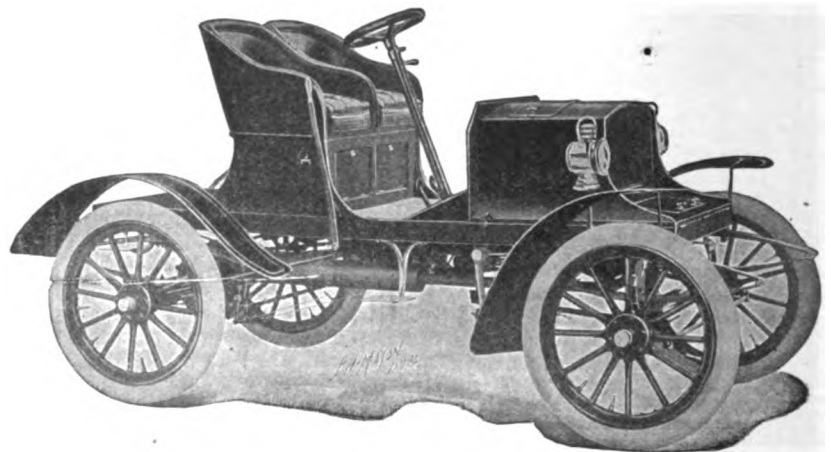
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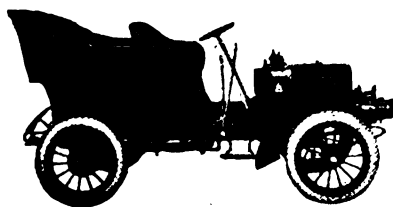
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If a better car than the YALE

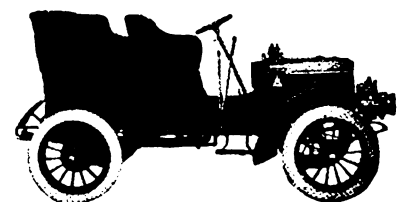
can be bought in America for the same money it was not shown at any of the great Automobile Shows. If there is a car as perfect, at the price, it has not been heard from this season. Dealers, drivers and prospective purchasers with one voice pronounce it the happy medium between the noisy, inefficient runabout and the ponderous, unwieldy racing machine.

We merely echo expert opinion when we say that the YALE is quite alone in its class—a model family car at a moderate figure.

We expect you to see and inspect the YALE; but if you'll send for our book it will help you to appreciate this splendid car.

THE KIRK MFG. COMPANY, - 950 Oakwood Avenue, Toledo, Ohio.

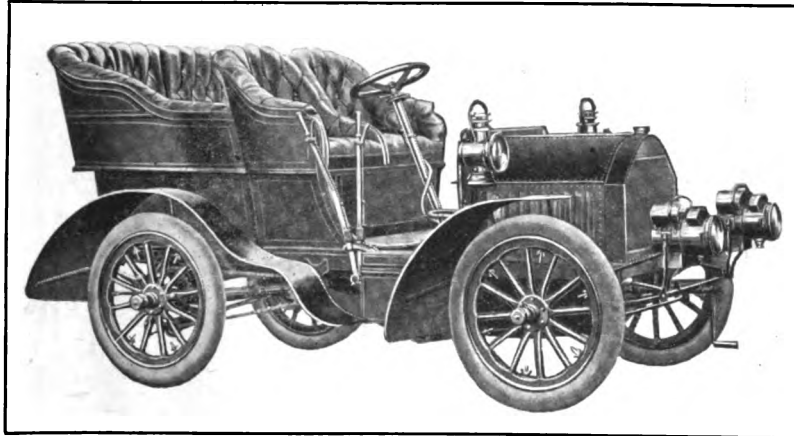
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LOCOMOBILE Gasolene Touring Cars are famous, and rightly so. Famous for reliability, which is the most important consideration. All material is selected with the greatest care, and our cars throughout have that fine finish which made foreign cars justly popular.

A customer writes that since the 22nd of January, 1903, his car has covered 13,950 miles, this distance being based on a careful estimate, taken from a record of daily runs. With the exception of a frozen radiator and tire troubles, his car has always made the trip for which it set out, and has always returned home under its own motive power.

Locomobile



GASOLENE

The car illustrated herewith is one of our 1904 models. A very desirable light touring car.

TYPE "C,"
\$2100

Complete.

Has double cylinder, front, vertical motor. 4-in. bore and 5-in stroke. Equipment includes five brass lamps, brass horn with flexible brass tubing, 20 tools, 20 extra parts, tarpaulin for protecting machinery underneath, lamp covers, and storm covers. Tonneau is detachable.

Address factory or any branch office for illustrated catalogue.

The Locomobile Company of America, Bridgeport, Conn.

NEW YORK, Broadway, corner of 76th Street.
BOSTON, 15 Berkeley Street.

CHICAGO, 1384 Michigan Avenue.
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Member Association of Licensed Automobile Manufacturers.

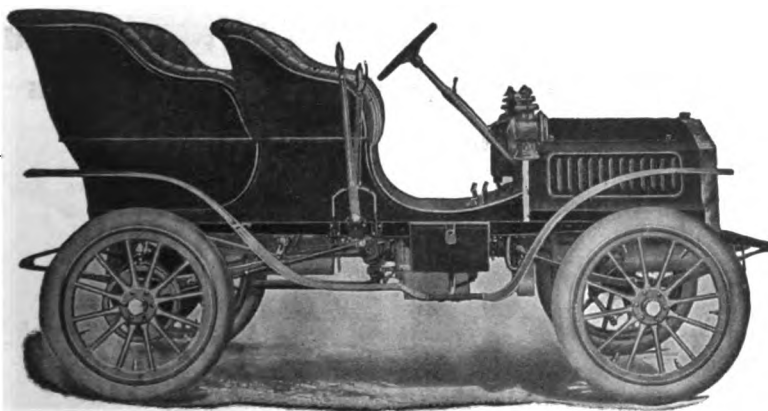
ELECTRIC

NATIONALS

GASOLENE

THE RIGHT CARS AT THE RIGHT PRICE

AN OPPORTUNITY TO DEMONSTRATE THE ASSERTION IS WHAT WE DESIRE



NATIONAL GASOLENE TOURING CAR

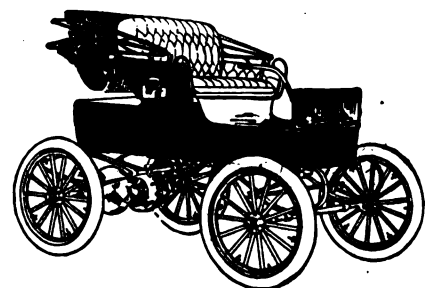
BRISTLING WITH IMPRESSIVE FEATURES.

CATALOG ON REQUEST

Agents Desired in Unoccupied Territory

NATIONAL MOTOR VEHICLE CO.

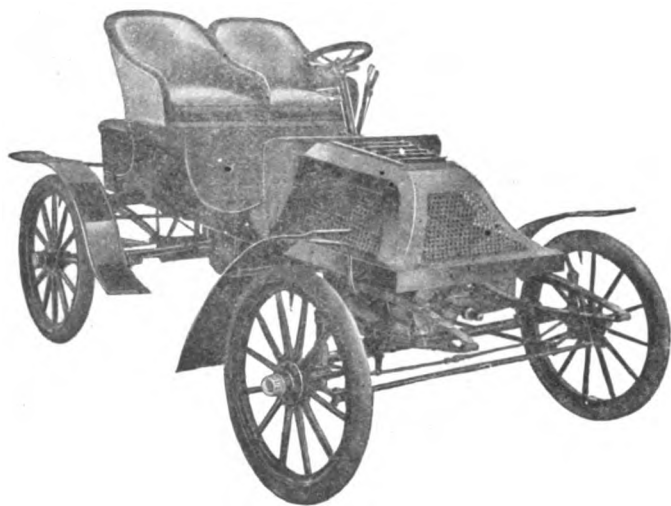
INDIANAPOLIS, IND.



Some People

are so superstitious that they consider it unlucky to sleep 3 in a bed, but everyone concedes that the dealer who secures the

Mitchell



is lucky beyond all others.

Have you been looking for a light car with 3 forward speeds? If you have, write us.

Do you believe in the multi-cylinder engine? If so, write us.

Have you an **AIR-COOLED** car in your line? If not, write us.

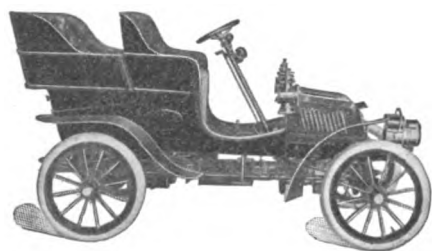
Do you consider automatic lubrication desirable? If so, write us.

If you desire more reasons for writing to us, write us and we will write you reasons that are right.

MITCHELL MOTOR CAR CO.,
Maker Motor Cars and Motorcycles,
9 Packard Ave., - Racine, Wis.

THE CREST

THE STANDARD LOW
PRICE AIR-COOLED CAR



Model D, \$900.

A 1905 CAR in 1904

DEPT. K Sends Catalogue with Full Details.

CREST MFG. CO.,
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Members of the Association of Licensed Automobile Manufacturers.

Why?

A great many people enquire why the Darracq Motor Cars are so popular and why so many more of these cars are sold than any other foreign make.

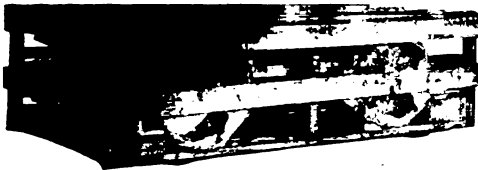
The answer is

Because they are Reliable and sold at the right commercial price.

F. A. LA ROCHE CO.,
Sole American Agents.
652-664 Hudson St.,
147 West 38th St.,
New York.

JUST LIKE SARDINES

This expresses very pointedly the appearance of a carload of Orient Buckboards as they are now being shipped to many of our largest agents. With the Buckboard a carload does not mean four or five machines, but, completely crated, as shown in cut, they pack in the car in layers two or three deep, like sardines in a box, making a load of 16 to 25, according to the size of the car. There is no extra charge for crating, and the rapid sale of this popular little machine makes it possible for agents even in towns of moderate size to order Buckboards by the carload and thus greatly reduce the cost of freight. If there is still a chance to secure the agency for your town, do not overlook the opportunity. Write for handsome new catalogue and agents' terms.



PRICE, \$425.

WALTHAM MFG. COMPANY,
WALTHAM, MASS.

Members of the Association of Licensed Automobile Manufacturers.

KNOX WATERLESS GASOLENE CARS

ARE ALWAYS ON DECK.

(THE CAR THAT OBTVIATES THE TOW.)

Six Styles Passenger Cars and Six Styles Commercial Cars to Choose from.

Tonneaus, Surreys and Runabouts.

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Catalogue.



Knox mechanism does it. Built for use, not merely for show. Yet their beauty is of a rich, fascinating type. In the Knox there is no water to freeze in winter. Has the only high-power engine successfully cooled by air. Keeps cool under every and all conditions ALL THE TIME, by the Knox patent system of air cooling—no overheating in summer. If it's a Knox it goes and keeps going 365 days in the year! Easiest to control; easiest to ride in.

IT'S THE PALACE CAR OF THE DAY.
There's luxury in running a Knox car.

Knox Automobile Co.,

SPRINGFIELD, MASS.

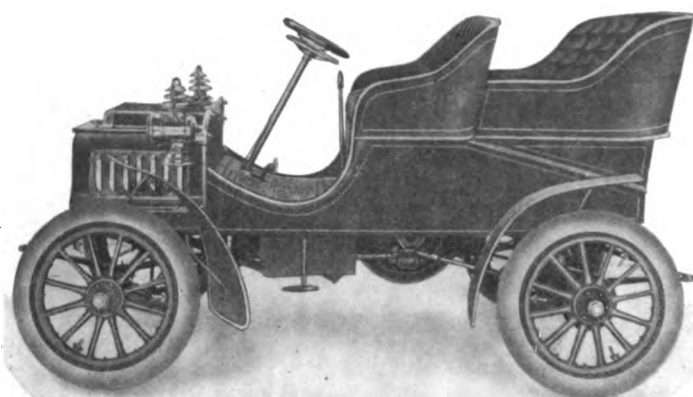
Selling Agencies in all the Principal Cities.

Members Association of Licensed Automobile Manufacturers.

The Best Price to Pay ^{for} an Automobile

IS THE PRICE OF A

Rambler



\$650—\$1350

You can't pay more and get your money's worth; you can't pay less and get satisfaction.

We have some intensely interesting reading matter bearing on the subject that we will be pleased to mail free to any address.

THOMAS B. JEFFERY & CO., Main Offices and Works, **Kenosha, Wis.**

BRANCHES: 145 Columbus Ave., Boston, Mass.

304 Wabash Ave., Chicago, Ill.

To Those Desiring a

practical business vehicle for all-around service, we unhesitatingly recommend the Model A Cadillac with a detachable tonneau. This powerful motor car is the result of careful study with a desire to produce a vehicle which would do satisfactory work on all roads, in all countries, and under all conditions, when operated by the average owner, and we have succeeded. Hundreds of owners are testifying to its merits. It was this machine which, with apparent ease, pulled a dray load of passengers (14 in all) up a 12 per cent. grade on Shelby Street, Detroit. There is no machine made which is a better hill climber, there is none made that will give better general satisfaction, and in the hands of a reasonable operator will last indefinitely. The price with detachable tonneau is but

Eight Hundred and Fifty Dollars.

There is no automobile the equal of the Cadillac at the price of the Cadillac. A strong but true statement.

Cadillac Automobile Company,

Members of the Association of Licensed Automobile Manufacturers.

Detroit, Mich.

It should take place. In union there is strength. It was felt that the older and stronger each of the separate organizations grew the more difficult would be the task of bringing them together.

"A few weeks ago President Whipple of the A. A. A. appointed a committee consisting of Winthrop E. Scarritt, president of the Automobile Club of America; John Farson, president of the Automobile Club of Chicago, and George F. Farrington, president of the Automobile Club of New Jersey, to confer with a committee from the American Motor League consisting of Isaac B. Potter and Frank A. Egan.

"After many conferences, which I am delighted to say were conducted in a spirit of frankness and fairness by both sides, a plan of merger was reached, which has to-day been approved by the governors of the three A's. It now goes to the membership for ratification.

"In undertaking such work as this all negotiations are hopeless unless they are entered upon not only in a spirit of fairness but of conciliation as well. The chief thought underlying our deliberations has been what is best for the organizations as a whole, what plans may be evolved that will bring the automobilists of America together into one clean, strong, helpful national association. If the plan outlined shall become operative I believe it will mark a red letter day in the history of automobilism in America. I hope that under President Whipple's able administration this result may be brought about. Secretary Gillette has done excellent work in stirring up interest and enthusiasm in many places and inducing several of the most prominent clubs in the country to join the Three A's. If the plan is carried out Mr. Gillette will of his own motion retire from the secretaryship in order to give his time to personal business."

The plan of merger as submitted by the committee and approved by the governors, and which it seems to be considered a foregone conclusion will be approved by the individual members of both organizations, is as follows:

1. The name of the united body formed by this merger shall be the American Motor Association.

2. The official year of the American Motor Association shall be fixed by the constitution and bylaws to be adopted as hereinafter provided. The officers of the American Motor Association, to serve during the balance of the present official year, shall be as follows:

President—Harlan W. Whipple, New York.
First vice-president—Charles E. Duryea, Reading, Penn.

Second vice-president—William H. Hotchkiss, Buffalo.

Third vice-president, A. P. Fleming, Los Angeles.

Secretary—Isaac B. Potter, New York.

Treasurer—George F. Farrington, Orange, N. J.

3. The general management and control of the affairs, funds and property of the united body shall be vested in a governing board, to be composed of ten directors, to be appointed by the A. M. L., and a similar number to be appointed by the A. A. A. The directors so appointed shall include the officers named in paragraph 2.

4. The racing department of the A. A. A.,

including its several appointees, shall be in no manner affected by this merger, but shall remain and continue in operation under the authority of the united body, subject only to such amendments, if any, as may hereafter obtain force.

5. A department of organization shall be formed and maintained for the purpose of enlarging and strengthening the united body and of directing and encouraging its effective work in various departments. This department shall be placed in charge of the secretary, who shall act as manager thereof, under such arrangements as may be deemed best for the effective upbuilding of the association.

6. In all cases where the two component bodies of this merger have national committees bearing the same title or similar titles, such committees shall become and operate as one committee for the balance of the present official year. Other committees of the A. A. A. and A. M. L. shall continue their duties as heretofore, with the exception of the racing committee of the A. M. L., which is now discontinued.

7. A committee consisting of two members selected from the present membership of the A. M. L. and a like number selected from the present membership of the A. A. A. shall prepare a constitution and bylaws to serve the purposes of the united body, and shall present the same to the governing board for its adoption. The constitution and bylaws so adopted shall remain in force until amended or superseded at a regular or special meeting of the united body upon due notice. Such constitution and bylaws shall, among other things, make due provision for the continuance of clubs, local organizations and individual membership in the American Motor Association, and shall harmonize as closely as practicable, with the constitution and bylaws of the A. A. A. and A. M. L. as framed prior to the merger of the two bodies.

8. This memorandum shall be submitted to the various local bodies and members contained in the merging organization for assent and approval, and a two-thirds affirmative vote shall be deemed sufficient to ratify the plan of merger herein set forth. The assent or objection of each member shall be taken by a mail vote, and for that purpose a communication, plainly stating the terms and purpose of the proposed merger, shall be submitted to each member, and, after a lapse of fifteen days from the mailing of such communications, members not having replied to the same will be deemed as in favor thereof.

S. M. Butler and Emerson Brooks will be the representatives of the A. A. A. on the constitution and bylaws committee.

It will be seen that those who do not vote in the negative within fifteen days will be recorded as in favor of the plan—a most remarkable proposition.

After the meeting every one seemed pleased with the prospect. Secretary Gillette said that he had tendered his resignation, to take effect May 1, before the merger plan was approved. He is of the opinion that under the constitution a notice of thirty days will have to be given and a special meeting of the whole body called before the matter can be submitted to a vote.

This plan for consolidation was, however, but one of the important pieces of business done by the A. A. A. governors at their meeting. They approved of the action of the racing board in suspending Barney Oldfield and adopting the European weight classification, told elsewhere, and they received and approved of the report of the special

committee on the question of taking control of motor boat racing.

The motor boat committee, consisting of A. R. Pardington, W. K. Vanderbilt, Jr., and L. R. Adams, reported in favor of taking control and regulating racing between the high powered craft of the type called autoboots, but not to interfere with any boating organization—in other words, to take control of whatever portion of the boat racing world may choose to recognize the control of the A. A. A. and to recognize at the same time the authority of the yachting and power boat bodies. The scope of the plan does not include all power boats. All persons and associations that wish to race under the A. A. A. rules must register with it. A. R. Pardington was appointed chairman of the newly created boat racing committee, with Lieutenant Charles H. Hall as official measurer and Herbert L. Towle official engineer. Mr. Pardington appointed L. R. Adams as one of his associates on the committee and is to name two others.

The change in the classification was made by adopting a new rule to the racing regulations, as follows:

RULE IX.

The classes for vehicles which are officially recognized by the Automobile Club of France are as follows:

1. Vehicles weighing from 650 to 1,000 kilos.

2. Vehicles weighing from 400 to 650 kilos.

3. Vehicles weighing from 250 to 400 kilos.

4. Vehicles weighing from 50 to 250 kilos.

Vehicles in Classes 1 and 2 shall carry at least two passengers side by side, of a mean weight of 60 kilos per passenger; it is understood that in cases where the mean weight of the passengers does not reach 60 kilos, the deficiency must be made up by means of ballast.

The weight of the vehicles in the several classes shall always be computed in the empty state. By weight in the empty state is meant with no passengers nor stores (coal, petrol, water, accumulators), nor tools, nor spare parts, nor luggage, nor clothes, nor provisions.

Vehicles which draw the energy required for ignition from a device actuated by the motor shall benefit by an allowance of weight of 7 kilos. The weight of lamps, lampholders and horns, is not comprised in the said weight of the vehicles.

By way of exception, in races on tracks and for record making, vehicles seated for two persons will be allowed to be occupied by one person only, but the necessity for two persons is indispensable in races on roads.

Besides, the Racing Board shall be judge as regards the admission of such other subdivisions which organizers of races may desire to make in the classes specified above.

These classification weights in kilograms have the following equivalents in avordupois pounds, as was shown in the Motor World of January 14, this year:

First class	.....1,433	to 2,204.62 lbs.
Second class	.....	881.84 to 1,433 lbs.
Third class	.....	551.15 to 881.84 lbs.
Fourth class	.....	110.23 to 551.55 lbs.

S. M. Butler was re-elected secretary to the board. Sanction was granted the Massachusetts Automobile Club for a race meet on the Readville track on May 30. Sanction was also granted for the Ormond (Fla.) meet, beginning January 17, 1905. Application for a sanction for a race meet at Virginia Beach, Va., was laid over.

A complete new set of racing rules is being framed by the Racing Board.

OLDFIELD IS SUSPENDED

**Barred From Tracks Indefinitely by A. A. A.—
French Racing Classification Adopted.**

Two interesting actions were taken at a meeting of the racing board of the American Automobile Association, held on Tuesday. For the first time in the history of the A. A. A., a sentence of suspension was passed on a racing man. Two were suspended—Barney Oldfield and E. C. Hausman—and they are to remain suspended indefinitely, until cut down by a special action of the racing board. The other action was the adoption of the weight classification used by the French Automobile Club and generally throughout Europe. This move was suggested by W. K. Vanderbilt, jr., and was predicted by the Motor World early in January, as something that would come to pass.

The disciplining action took the form of the following resolution:

Resolved, That inasmuch as Barney Oldfield and E. C. Hausman have by their action in competing in unsanctioned events at Savannah, Georgia, on February 25, and at Birmingham, Alabama, on March 5, disqualified themselves under Rule 6, of the Racing Rules of the American Automobile Association, that the secretary be instructed to advise promoters of all future race meetings sought to be sanctioned by the Racing Board, under the rules of this association, that Messrs. Barney Oldfield and E. C. Hausman are disqualified as above; that sanctions to such promoters will not be granted unless such disqualification is enforced.

Resolved, That said disqualification be continued until further action on the part of this Racing Board.

A rumor is being persistently circulated, with an official of the Winton Motor Carriage Company quoted as the source of it, to the effect that Barney Oldfield's connection with the Winton concern has been, or will soon be severed. In view of his suspension such a happening seems not at all improbable now, whether it was earlier contemplated or not.

No Records at New Orleans.

"Barney" Oldfield's last appearance before his suspension by the A. A. A. was made at New Orleans, La., on March 26. There at the Jockey Club track 5,000 persons saw both Oldfield and E. C. Hausman fall in attempts to lower records. The track was in poor condition. Oldfield went against his own record of .55, made on a circular track, and covered the mile in 58 seconds. Oldfield subsequently tried to smash his ten-mile record of 9.32. He finished in 9:49 1-5. Each of the last two miles was run in .58 flat.

Hausman made two circuits of the track, the first in 1:05 and the second in 1:01 3-5.

Rigolly gets two Records.

French records for both the kilometer and the mile were made at Nice, France, on April 1, the new record holder being Rigolly, in one of the new 100-horsepower Gobron-Brille cars. His times were 25 3/4 seconds for the kilometre (.62 of a mile) and 53 3-5 seconds for the mile. Both were made over a straightaway course, the longer distance being from a standing start.

The kilometre has long been the favorite French short distance, and Rigolly's mark replaces that of Duray, made at Dourdan last fall, viz., 26 2-5 seconds. The mile, however, has been little attempted by French racing men.

The Week's Incorporations.

Chester, Penn.—Penn Automobile Co., with \$5,000 capital.

Fort Wayne, Ind.—The Randall Motor Car Co., with \$10,000 capital. A. L. Randall and Louis Ohnhaus are the principal stockholders.

Chicago, Ill.—Park Automobile Co., with \$2,500 capital, to manufacture automobiles, operate bowling alley and billiard room; incorporators, F. H. T. Potter, M. J. Merkl and O. T. Cody.

Rahway, N. J.—Commercial Truck and Power Co., with \$50,000 capital, to manufacture air compressors, boilers and automobiles. Incorporators, Henry A. Grube, Henry R. Lamphear and Fred C. Heyer, all of Rahway.

Camden, N. J.—Camden Motor Co., with \$2,000 capital, to deal in automobiles and accessories. The stockholders are Josiah G. Reeves, John T. Bottomley, C. M. Reeves, E. G. Reeves. The company's office is at No. 1,068 North Seventh street, Camden.

Hartford, Conn.—National Association of Automobile Manufacturers, to "promote the interests of the members as manufacturers and sellers of automobiles and all other self-propelling vehicles." J. Wesley Allison, William R. Innes and Albert L. Pope are the incorporators.

Middletown, Conn.—The Swan Mfg. Co., with \$50,000 capital, to manufacture engines, automobiles, machinery, electric apparatus and supplies, and to do a general manufacturing business. William J. Swan, of Middletown; Frank H. Harriman, of Hartford, and Z. E. Dowd, of Meriden, are the incorporators.

Century Creditors Meet April 11.

Notice is being sent to creditors of the Century Motor Vehicle Co. of Syracuse, N. Y., which was on March 1 adjudged a bankrupt, that April 11th has been set as the date for the first meeting of said creditors. It will be held at room 330, Onondaga County Savings Bank Building, Syracuse, N. Y., at 11 o'clock in the forenoon, "at which time the said creditors may attend, prove their claim, appoint a trustee, examine the bankrupt and transact such other business as may properly come before said meeting."

ALMOST A LAW

**Hill Bill Passes Assembly and now Only Needs
Governor's Signature.**

The Hill-Cocks automobile bill passed the Lower House of the New York Legislature yesterday. Having already been passed by the Senate, it is now ready for the Governor's signature, which there is no reason to believe will be withheld.

The bill was published in full in the Motor World last week.

It is not generally known that the vote in the Senate was unanimous, even Senator Bailey voting for it. His name is one of the first on the roll, and when he voted "Aye" it created a mild furore; his action, it is said, influenced several other votes. It, of course, disposed of the amendments to his own bill which Mr. Bailey introduced on the first day of the present session. The Federation of American Motorcyclists is credited with having greatly influenced Mr. Bailey, who is a great friend of cyclists generally.

Although its interests and plans were compromised by the bill as originally drawn, after its demand that motorcycles be removed from the bill was acceded to, the F. A. M. loaned its support and has really done more to assist its passage than is generally known. The Albany legislators still entertain great regard for the cycling vote.

Sampson Cup Car is Out.

It was no surprise when it was announced last week that the Bennett cup racer of Alden Sampson will not be ready in time to report to the A. C. A. race committee on April 16. There is still some doubt of whether or not all the other cars will be ready. It is also practically settled that the test race—if it ever comes off—will not occur on the Ormond Beach, as originally planned.

More Committeemen for Tour.

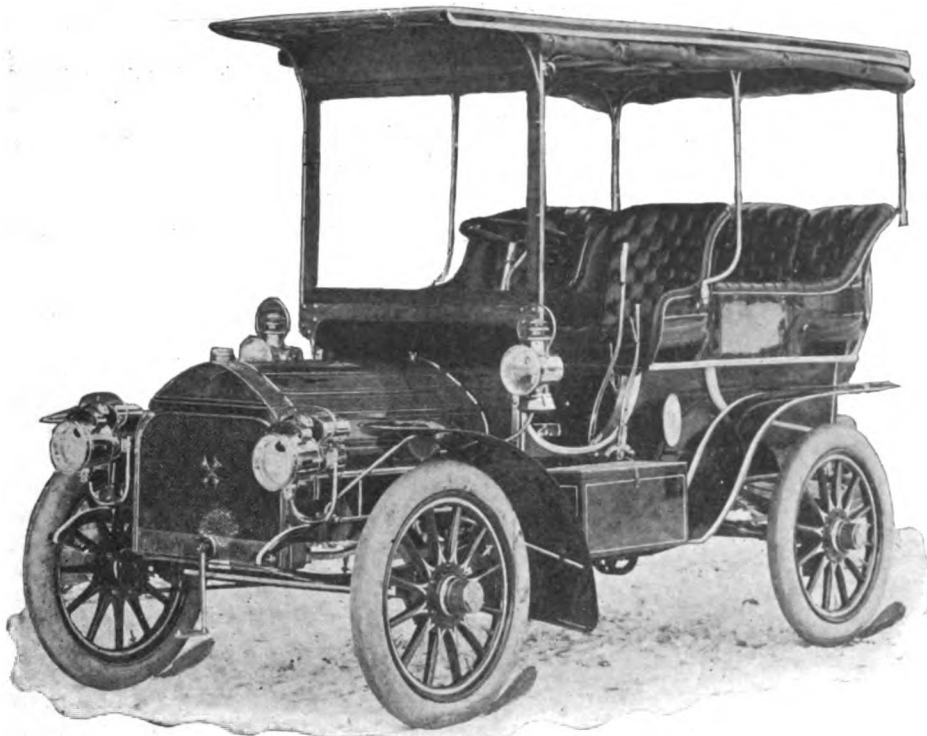
Augustus Post, chairman of the committee on the St. Louis tour of the A. A. A., announced this week the following additions to the national committee: William Money-penny, jr., of the Columbus Automobile Club; Frank A. Garbutt, of Los Angeles; A. P. Fleming, of Los Angeles; W. C. Temple, of Pittsburg; Herbert A. Walker, of St. Louis.

Drivers Invite Motorists.

A further expression of the cordial relations established by President Scarritt of the A. C. A., between the automobilists and the horsemen is found in the fact that the Road Drivers' Association of New York has voted to invite the officers of the various automobile clubs to review its parade on Speedway Day, May 14.

The Worthington Automobile Co., this city, have moved to a new establishment at Fifth avenue and Forty-fifth street, where they will handle the Bollee French cars and also a line of well known American cars.

THE 1904 HAYNES-APPERSON AUTOMOBILES



Tonneau, \$2550 complete; \$2450 without top or front glass. For particulars see catalogue.

were the only 1904 models in the New York to Pittsburg Run and earned Two First Class Awards.

It shows fewer mechanical changes and contains more features that years of use have proved perfect in practice than any other, and is backed by an unequalled past record—seventeen contests entered—seventeen contests won, with stock cars.

HAYNES-APPERSON CO.,
KOKOMO, IND., U.S.A.
The Oldest Makers of Motor Cars in America.

Members of the Association of Licensed Automobile Manufacturers.

Branch Store: 1420 Michigan Ave., Chicago. Eastern Representatives: BROOKLYN AUTOMOBILE CO., 1239-41-43 Fulton St., Brooklyn, N.Y., and 66 West 43d St., New York. Agents for Western New York: BUFFALO AUTOMOBILE EXCHANGE, 401 Franklin St., Buffalo N.Y. Agency for Southern California: J. A. ROSESTEEL, Los Angeles.

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Fisk Detachable Tires

Are mechanically fastened
Can't blow off the rim
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Can't be put in wrong
Can't give dissatisfaction



If you want data about changing over Autos., write us or our Branches.

We are full of it and it costs you nothing.

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NEW YORK,
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FISK RUBBER COMPANY,
CHICOPEE FALLS, MASS.



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Those who are interested in motor vehicles will find the facilities and information of our office always at their command.

To Facilitate Matters Our Patrons Should
Address us at P. O. Box 649.

CABLE ADDRESS, "MOTORWORLD," NEW YORK

Entered as second-class matter at the New York, N. Y., Post Office, November, 1900.

NEW YORK, APRIL 7, 1904.

The amalgamation of the American Automobile Association and the American Motor League can be brought about none too soon. There never was room for more than one national organization, as the Motor World for years has contended. It will be interesting to observe, however, if the consolidated body will be of and for automobilists or of automobilists and a lot of other people willing to be separated each from \$2.

Late Season Compensations.

On the theory that it is an ill wind that blows no one any good, the present untoward spring has its compensations. Never before have so many makers been behind with deliveries. Nothing but a much belated season has saved them from grave embarrassment, and their agents from many lost sales. The past week has seen a decided betterment both as to sales and deliveries, but there is still room for much improvement, especially in the latter particular. Scarcely

a dealer but is short of some models of cars, while some of them are mourning the absence of pretty nearly the entire line.

One of the causes to which the delay in deliveries is attributable is the scarcity of assemblers. In a considerable proportion of factories it is in the assembling rooms that the final and most aggravating delays have taken place. The shortage of assemblers extends to both quantity and quality. The highways and byways have been scoured for men experienced in such work, and when the available supply became exhausted, which occurred early, the next best class was taken. As a result assembling departments have been clogged with work which has piled up much faster than it could be disposed of.

Greater care, too, has been required to see that the assembly was properly, as well as expeditiously, done, and a number of expedients have been resorted to in the effort to grapple successfully with this phase of the matter.

In one factory a bonus in the shape of an overtime allowance was offered for such cars as passed inspection. The men worked industriously to earn the bonus, but out of one batch of twenty-four cars assembled only one succeeded in passing the scrutiny of keen eyed inspectors and was approved. The cost of the overtime on this car was, of course, trivial in comparison with the amount it became necessary to expend on the other twenty-three.

The Helpless Motorist.

Only a few weeks ago the spectacle was presented of a motorist of considerable experience stating seriously in a public speech that motorists were the best friends of railroads, inasmuch as for one mile they drove while touring they rode four miles in railway cars. It is almost superfluous to add that the speaker was Mr. James B. Dill, the well known corporation lawyer.

While the statement was, of course, greatly, and perhaps intentionally, exaggerated, there is no denying the fact that there are a number of motorists who consider, and rightly, railroads, telephones, horses and similar contrivances their best friends. They form a distinct class, of which Mr. Dill is a proper exponent. Mechanics are not in their line; no such word appears in their lexicon. They would not if they could, and could not if they would, examine the "innards" of their car and diagnose the causes of trouble. Without their "man" they are helpless. Robinson Crusoe, cast ashore on his isle was not a

little as perplexed as they would be if a nut came loose in the absence of their mechanic and no railroad train or other method of conveyance was available and no telephone at hand. Their only recourse would be to sit, Micawber-like, by the roadside and wait for something to turn up; or to make requisition on Shanks's mare and foot it to the nearest life-saving station in the shape of a garage.

It was related to us recently by one motorist that a friend of his found himself stranded, he having incautiously ventured afield without his "man," and, his machine having come to a sudden and untimely stop. He looked for help, and none came. In the end he walked three miles to a telephone booth and 'phoned for a car to haul his vehicle home. An examination revealed the fact that his gasoline tank was empty! A short time afterward he was en panne again, and from the same cause. Yet he disdained to vary his former procedure one jot, but cried for assistance as before!

Such "motorists" as these are beyond cure, so they must be endured. Like the poor, they will be always with us, and all we can do is to hope that they will get a fair amount of driving out of their motoring experience. To them the working of a valve is as profound a mystery as the translation of the cuneiform inscription on an Assyrian monument to the ordinary mortal, the principle of the electric current as impossible of comprehension as the finding of the fourth dimension or the squaring of the circle to the seeker-after hidden knowledge. When misfortune overtakes them they cry Kismet and meekly submit to the infliction.

Nor is it to be inferred that it is the motor vehicle alone that inflicts temporary paralysis upon them. If they were driving a team of horses, instead of an inanimate creation, and anything went wrong, they would be equally nonplussed. The repair of a broken piece of harness would be no easier than the filling of an empty gasoline tank. It is the genus itself that is lacking in either inclination and ability, or both, to investigate and learn, and no change of environment or of vehicles would bring about a different result.

The Part Looks Play.

A move that is most emphatically one in the right direction has been made by the Automobile Club of Great Britain. It will require the cars competing in the London and Glasgow non-stop run next May to reach their nightly destination clean, instead of buried under a mass of mud and dust,

The step is taken solely in order to counteract the unfavorable impression a multitude of unsightly cars makes on the non-motoring public. They, not unnaturally, are anything but edified or attracted by a pastime which makes such guys of its devotees. A well designed and handsomely finished car, with a gay load of well dressed people, starting out for a day's pleasure, is one thing; quite another is the return of the vehicle, all its beauty gone, and both it and its passengers liberally besprinkled with the top dressing from the roads, until they are scarcely recognizable. A sight of this kind repels, and while it may be asserted that it is almost inseparable from long distance motoring, and be made light of by genuine enthusiasts, there is not much wisdom in flaunting the fact in the face of the public.

The truth of the matter is that most motorists pay too little attention to outward appearances. If they please themselves they consider that they have done all that is necessary. If the pleasures of motoring compensate for some inconveniences, they are apt to make light of the latter, and to be indifferent to the opinion of others. Why they should defer to non-motorists in the matter of appearance is something they cannot understand.

It should be just the other way. Because the automobile is a machine, and therefore less clean than other vehicles, is all the more reason why its users should be sensitive and seek to redeem it from the dirtiness incident to machines ill kept or cared for. The freight locomotive may be permitted to present a neglected and forlorn appearance outwardly, but its mate, the passenger engine, is kept spick and span, its brass and nickel work resplendantly bright and clean, its working parts free from superfluous oil and grease. As it dashes into a station it is felt to be, in a measure, on parade, and its engineer and fireman take pride in its presenting a good appearance. Much more is a horse-drawn vehicle looked after. The drag which takes a merry crowd to the races is immaculate at the starting point and is brought into the rendezvous as clean as can reasonably be. Arrived there it is gone over by eager attendants and made to shine again.

It may be said that the automobile goes farther and faster than any horse-drawn vehicle, and that a weather beaten and travel stained appearance accentuates its points of superiority and its all around utility. So it does. But as yet the comparison is naturally with the horse-drawn

rival, and many possible motorists are repelled by the unsightly appearance of cars, and draw comparisons, without reflecting on the infinitely greater radius of the motor vehicle. In the eyes of many people the latter is still hanging in the balance, and such comparatively unimportant matters as outward semblance will often prejudice a prospective purchaser against it.

New Jersey's Little Joker.

A little joker which has slipped through the New Jersey Legislature is pregnant with possibilities of trouble for motorists. Under the specious guise of a solicitude for motorists themselves, who have in the past been held up by rural constables on the plea that it was impossible to distinguish their New Jersey numbers from those of other States carried on the cars, a bill has been introduced and passed forbidding the carrying, while in the State, of any numbers save those of New Jersey.

There are hundreds of New Jersey motorists who carry the numbers of other States, finding it necessary or convenient at times to visit them. They will now be compelled to remove these numbers while in the State, and attach them when entering New York or Pennsylvania, thus entailing a vast amount of inconvenience and provoking an equal, or greater, amount of profanity.

The tourist, too, will have life made unpleasant. He is not likely to know of the existence of the addition to the present law until he is caught "with the goods on," and his fancied security, due to the possession of a New Jersey number, will prove his undoing.

As to the immunity from holdup by bucolic constables, who will now be able to distinguish the New Jersey number without difficulty, we may be pardoned for being incredulous on this point; some other game will be worked, some other excuse found, for his officious interference.

Mischievousness and Hoodlumism.

As chickens and other domestic "animals" are among the worst enemies of the touring motorist, so children who persist in seeing how near they can come to being run over and yet escape that fate are one of the many bete noirs of the city driver. It is only natural that the automobile should have an attraction for vigorous and healthy children, but their curiosity should be tem-

pered with discretion. Especially should the pastime, which is popular in some sections, of seeing who can cross a street in front of a rapidly approaching car and come closest to it, be discouraged in every possible way. Should a mistake be made in the boy's calculation, and he be struck by the automobile, the driver of the latter is always blamed.

Hoodlumism is also altogether too rife. The bigger boys who cross the line between mischievousness and malignance are in need of repression. Their habit of assailing passing motorists with whatever missiles come handy is always fraught with danger. Indeed, the wonder is that serious accidents do not happen. Time and again operators have been temporarily incapacitated by being struck in this manner—notably a week or two ago in a case at Long Island City, where the machine smashed into a wall and its occupants narrowly escaped with their lives. Only vigorous measures on the part of the police will keep these hoodlums in check, and there is far too much laxity where motorists are concerned.

Chauffeurs who are Wise.

There is food for thought in the view of the responsibilities of a chauffeur taken by the newly formed association of California chauffeurs, reported in another column. Members are divided into three classes, ranked according to their expertness and experience, and their pay varies correspondingly. They must pass an examination before admission—a sure method of weeding out the incompetent and of protecting employers, if the examinations are bona fide. This looks like reform from the inside, and a step in the direction of creating an esprit de corps that will, if carried through, do much to redeem the chauffeur from the burden of obliquity under which he labors at present.

As an evidence of good faith the resolution of the chauffeurs comprising the association to keep within the legal limit of eight miles an hour in Golden Gate Park, is both noteworthy and commendable. It augurs well for the success of the organization.

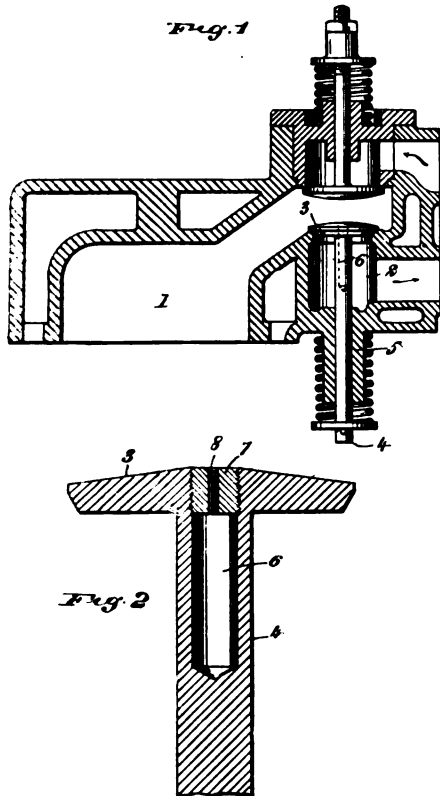
"Out of sight, out of mind," does not apply to all motorists. Because we have had a long respite from the dust nuisance, it does not follow that it has been forgotten. As a matter of fact, it is well understood that dust is one of the greatest foes of motoring, and many efforts are being made to find an antidote for it.

Details of Tracy Ignition System.

A great deal of interest has been manifested in the exhaust valve system of ignition devised by Joseph Tracy, which was told about in the Motor World last week. In order to furnish those interested with more technical details of the invention, the description and drawings of it as they were issued in the patent papers are given herewith:

Application Filed October 21, 1902. Serial No. 128,130. (No model.)

Be it known that I, Joseph Tracy, a citizen of the United States, and a resident of the city of New York, Borough of Manhattan, in the county and State of New-York, have invented new and useful improvements

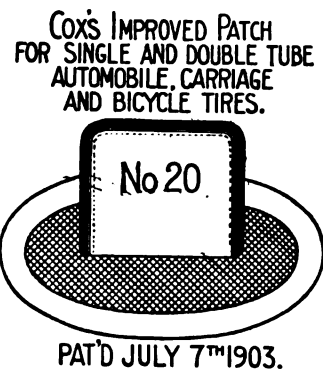


combustion chamber of an engine, which communicates with the usual exhaust port 2. This exhaust port is controlled by a valve 3, the stem 4 of which passes through a guide 5. The inner end of the stem is provided with a longitudinal bore 6, which forms a chamber for the entrance of gas and air. In the mouth of the bore is a threaded plug 7, having a perforation 8, which forms a restricted outlet for the enlarged bore or chamber 6. This restricted outlet is not required in all cases; but it is preferable in fast running engines where a quick outflow of flame and quick ignition are required, and, of course, the perforation may be made of any size to suit conditions.

The operation is as follows: After the engine has been in operation a short time the valve stem becomes heated by the exhaust to a sufficient degree to ignite the combustion agent. When the charge of gas and air is

Plug with Oblong Stem.

A concern that has long made a specialty of repair goods for pneumatic tires is Cox & Spencer, Rahway, N. J. The Cox improved plug and patch, which is herewith shown, is recommended as a sure cure for punctured or cut single or double tube tires.



The stem is made oblong so it can be cut to fit all kinds of cuts and punctures. The inner surface of head is corrugated so that it will not expel the cement between the wall of tire and head of plug. The stem fills up the cut or puncture, holding the patch firmly in place.

in a combined exhaust valve and igniter, of which the following is a full, clear and exact description:

This invention relates to improvements in combined exhaust valves and igniters for combustion engines; and the object is to provide an exhaust valve with a simple, inexpensive and reliable means for igniting the charge of combustion agent.

I will describe a combined exhaust valve and igniter embodying my invention, and then point out the novel features in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both the figures.

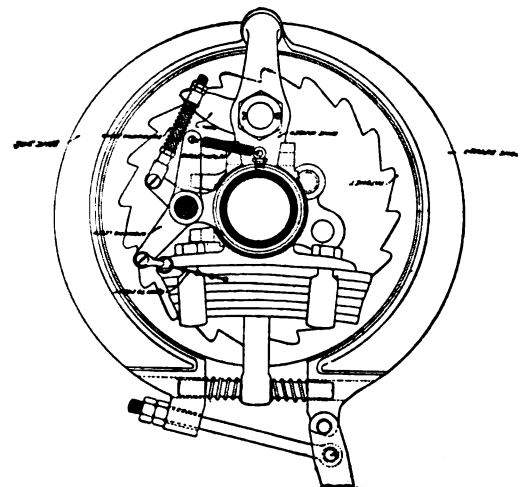
Figure 1 is a sectional view of a portion of a combustion engine, showing combined exhaust valve and igniter embodying my invention as applied thereto; and Fig. 2 is a longitudinal section of the valve.

Referring to the drawings, 1 designates the

The Thomas Speed Governor.

There are few motorists who have not at some time or other been made nervous by the thought of the brakes refusing to hold and the motor becoming inoperative on a steep upgrade. Various devices have been experimented with to provide for such an emergency, the best known being the sprag, which is nothing more than an iron bar, one end of which is dropped as the car begins to run backward.

A much more slightly and mechanical method has been brought out by the E. R. Thomas Motor Co., and is incorporated in this year's Thomas cars. As the illustration shows, the device consists of deep notches inside each brake drum of the rear wheels. When starting to ascend dangerous hills the operator can drop a strong pawl into each of these notches, and in case anything happens to cause the car to stop and the brakes refuse to hold, this device will prevent the car



from running backward more than three or four inches at the most, unless it should slide bodily, as it effectually locks the rear wheels to the rear axle.

All About Whitney Chains.

Concise yet comprehensive is the booklet just issued by the Whitney Mfg. Co., Hartford, Conn., and devoted to their extensive line of chains. It begins by giving the dimensions of the six sizes of Whitney "Standard" roller chains, which range from 3/4-inch to 2-inch in pitch and from 3/8-inch to 1 1/4-inch width, together with fullsize cuts of all six styles. The two new Whitney detachable roller chains are next described and illustrated. One is made with a spring steel locking plate, the other with a cotter pin fastening. The latter is proving particularly popular, and is already being fitted by a number of makers, although brought out only in February.

A page is devoted to connecting links, and in the remaining pages are detailed the advantages claimed for Whitney "Standards," very complete lists of tables of sprocket diameters, testimonial letters and suggestions which will be of interest to manufacturers, dealers and users. The tables of sprocket diameters have been calculated with great care, and they should be of particular value to designers of automobiles, machinery, etc.

TOO MUCH MOTOR BOAT?

Monaco Meeting Gives Hint That Danger Point Is Near—French Traffic Regulations.

Paris, March 29.—On Monday next will start the great motor boat racing festival at Monaco, organized by the International Sporting Club, who are offering prizes to the value of more than \$20,000. It would be impossible to imagine a fairer site for a motor meeting than the Bay of Monaco, which, viewed from the heights of La Turbie, looks more like the highly colored background of a theatre than an actual piece of landscape scenery. It is here that the interest in motor boat racing all over Europe will be centered during the two weeks the meeting will be in progress.

There is no doubt that the Monaco festival marks the second stage in a tremendous movement which is going to take place in motor navigation during the present year. This movement was started about six months ago by the race of motor boats between Paris and Trouville, and the way in which the new sport has been developing since then is nothing less than phenomenal. Comparatively speaking, it has caught on quite as strongly with a certain class of people as the motor vehicle, and yet when we come to look at the difference between the two it is really difficult to understand how the motor boat should be just now enjoying such a considerable popularity. No one, of course, can pretend that the motor boat has anything like the same utility or source of pleasure as the automobile, for while the road vehicle can be used all the year round and can be put to an almost unlimited number of uses, the motor boat is essentially an instrument of pleasure that can only be employed during a part of the year. The rivers and canals do not usually flow before one's door step, nor has the man who indulges in motor boating much of a choice in mapping out inland tours. He must go where the water takes him, and he cannot open up new ground when he has explored the limited number of waterways in the country.

Somebody, of course, has an interest in popularizing the motor boat, or we should not find people going to so much expense and trouble in organizing races like those at Monaco. The immediate aim of race promoters in organizing these meetings is to create a movement which will be profitable to makers of internal combustion engines. It is, indeed, very closely bound up with the automobile industry. The production of cars in France is so considerable that builders are beginning to get somewhat anxious over the future course of trade, for it is evident that now they are capable of turning out more cars than France and England can purchase at the present time. They must look to the opening up of new markets and an increase in the purchasing capacity of those already existing. But, unfortunately for the French makers, other countries are

beginning to turn out very reliable cars, or at any rate, are giving promise of being able to supply the home needs in the early future, and as they see that they have got to the limit of the French trade in vehicles they are looking out for new fields to conquer. It is chiefly for this reason that so much prominence is being given to motor boats. Every maker of motor cars in turning out engines for launches, and the boats themselves are often built at the carriage factories where this branch is coming to be recognized as a legitimate part of their trade. The movement, while it lasts, is certain to be very profitable to the motor car firms. They find a big business for the huge engines which they are no longer able to fit to road vehicles, and in a general way the motor boat will serve to provide occupation to the automobile factories during the seasons when they have comparatively little to do. The only danger is that the automobile concerns will attach too much importance to the vogue now being shown for the motor launch. If this popularity should continue to increase it would be highly satisfactory to the trade, and would serve as a sort of regulator to the fluctuating demand for high priced motor cars, but while hoping that the movement will grow as rapidly in the future as it is doing at present it may be just as well to sound a note of warning by pointing out that there are serious limitations to the sport of motor launch racing which may, at some time or another, result in a considerable overproduction of gasoline propelled boats, unless it is accompanied at the same time by a sustained interest in motor boat cruising as a pastime.

The meeting in the Bay of Monaco, under the shadow of the gorgeous Casino, where Europe gambles under the indulgent eye of a civilized government, is being preceded by the annual automobile meeting at Nice. At one time the Nice meeting was counted among the most successful and most popular events of the year. It was a time when racing and speed trials of all kinds were authorized, and the makers of all countries made it a rule to send their newest types of speed machines, so that Nice was not only interesting from a sporting point of view, but it also allowed of visitors inspecting cars which represented the latest developments in automobile construction. The glory of Nice was unfortunately wet blanketed by the fatal accident to Count Zborowsky on La Turbie last year, which led to a government man suppressing speed tests at these meetings. The sporting events in the programme this year are being confined to the mile race and possibly also the hill contest for the De Caters's Cup, though it is by no means sure yet whether this latter test will be authorized. The other events comprise a three days' promenade of touring cars and the usual display of decorated vehicles on the Place Massena. With such meagre fare there is not much inducement for those interested in the sport, or in the technical progress of automobiling to make

a special journey to Nice, and there are few new cars of any interest taking part in the meeting. Nevertheless, there is always at this time of the year a considerable number of automobilists down South, and their presence is quite sufficient to make the meeting a success, but, as an international gathering, it is to be feared that Nice has seen its best days.

Some months ago I dealt rather fully with the formation of the Extra-Parliamentary Commission which was appointed by the government to reorganize the regulations relating to motor car traffic. This commission has been divided up into committees, each of which has been entrusted with a particular phase of automobiling, and quite a mass of interesting reports have been issued by these committees to assist the Extra-Parliamentary Commission in coming to a final decision. During the past week the commission has started to discuss these reports, and so far as can be seen at present it is likely to recommend a series of regulations which, on the whole, ought to give satisfaction to motor car users. It is suggested that the cars should be divided roughly into two classes, those running at not more than 15 miles an hour and those capable of traveling up to 60 kilometres—37½ miles—which is to be the legal limit of speed. In the former case it is proposed to dispense with the necessity of carrying numbers or getting licenses, the driver of such a car being, in fact, quite as free from restriction as the owner of any horse-drawn vehicle. But on cars traveling up to the legal limit it is proposed to fix a plate giving the power of the engine and the ratio of gear, while the owner himself will have to pass a very severe examination in order to get a driving license. The primary object of this regulation is to make it absolutely sure that every part of the car is able to stand the strain to which it is put at high speeds, the plate of course only being fixed to the car after it has been examined by the State engineers. The commission is in favor of graduating driving licenses, so that a man will not be able to drive a fast car until he has had some experience with vehicles traveling at 15 miles an hour and less.

The delegates of the sporting commission of the A. C. F. have had an interview this week with the prefect of the Ardennes to discuss the measures to be taken in the interests of the public on the occasion of the elimination race, which is to be run over the French Ardennes course on May 20. The principal measures will be that the roads through towns and villages will be tarred and closed in with wire netting on each side, and that about three thousand soldiers will be on guard spaced 100 yards alternately on each side of the road, so that they will be separated by 50 yards. The population in the Ardennes is looking forward to the race with the greatest enthusiasm, and if the contest is run off without accident it is very probable that the government will consent to the holding of annual meetings over the Ardennes course.

A. C. A. SERVICE TEST STARTS AUSPICIOUSLY.



STARTING FOR FLUSHING WITH A 5,000-POUND LOAD.

Bright and early Monday morning, except in the case of one truck that started too early for it to be bright, the second annual contest for commercial motor vehicles, under the auspices of the Automobile Club of America, was begun. A "service test" the club has appropriately styled the affair of this year, for it was arranged that the vehicles which entered should be put to work at the everyday tasks of an express company and a brewery.

Eighteen vehicles entered for the event. All but one weighed in, that one being the entry of the Commercial Motor Co., which could not be finished in time. Of the seventeen two were assigned for the week to the service of the H. Clausen & Son brewery, at Forty-seventh street and Second avenue, New York, and the other fifteen to the work of the American and Westcott Express Co. The two big trucks detailed for brewery work were loaded with kegs of beer and sent off into the world, one at 5:10 a. m. and

the other at 6:30 a. m., and none of the officials, nor the reporters, nor the photographers were on hand to see them off.

It was different with the wagons and trucks assigned to the express company. They were scheduled to start from the depot of the concern on Madison avenue, near Forty-sixth street, at 8 a. m., and President Scurritt, Secretary Butler, John A. Hill, chairman of the contest committee, and the usual corps of press representatives and camera sharps were on hand to see them begin their weeklong round of toil. The wagons and trucks enlisted were of wide variety of style, size and capacity, and they made a brave showing as they stood along the curb on Madison avenue. The spectacle was strongly prophetic of the time when the traffic of the cities shall be done by power vehicles, to the almost total exclusion of the horse, and it attracted a curious crowd, early as it was. There were several wagons of the regulation express baggage type, a couple of trucks and a squad of hooded little delivery wagons that, alongside of their bigger companions, reminded one of the sove-

nirs in which sorbet is served at the formal dinners of automobile organizations.

In the manoeuvres incident to backing into the platform to get their loads the motor vehicles showed up to much better advantage than the horse drawn wagons with which for a week they were to compete. Some of the horses were yanked about unmercifully while the drivers swore, but every one of the motor wagons wheeled and backed in without a hitch or a hesitation. Not one operator had to pause to do any adjusting or tinkering with the motor. It was an auspicious beginning. Promptly at 8 o'clock the first vehicle, the Union Stake truck, was dispatched with a load for Jamaica, and the "service test" had begun.

Among the vehicles that started in the test were the Knox delivery wagon, No. 5, and the Knox baggage wagon, No. 6, operated by A. G. Gruendler and J. E. Cowen, respectively, which, as a preliminary to the week's work, had an informal endurance run from Springfield, Mass., to New York. They left Springfield on Friday night, travelled all night, and were several times stuck in the

mud so badly that the use of shovels, horses and planks was necessary to extricate them. They finally got to New York at 11 p. m. Saturday, in perfect running condition. It was a Knox delivery wagon that finished first in the contest of last year.

It was the aim of the contest committee of the Automobile Club, composed of John A. Hill, Roland Conklin, Emerson Brooks and S. M. Butler, to have the test this year one which would furnish to merchants everywhere exact information concerning the efficiency, reliability and economy of the commercial motor vehicle. To this end the express company and the brewery people co-operated in every possible way. On the first day C. J. Blanthorne, the master of transportation for the express company, had to labor with an unforeseen difficulty. He did not know what style of vehicles were to be presented to him, and therefore did not know what sort of merchandise to have ready in order to give them their requisite loads.

When the trucks and wagons did present themselves he found about half of them inadequate in their construction for the miscellaneous character of the loads he had for them. He called attention to the fact that the delivery wagons built to carry from 500 to 2,000 pounds were so small that in order to give them their proper load they would all have to carry hardware, and he did not have hardware enough to go around. Comparatively few of the wagons were of such a construction that they could carry a load of any bulk, and much of the general merchandise handled by an express company is more bulky than weighty. Owing to this difficulty a lot of the vehicles were sent off on their first trip with loads way below their capacity. In calculating the hauling cost

per ton mile a light load puts a vehicle to a disadvantage. Secretary Butler, when questioned about this, said that some adjustment would have to be made later. Transportation Master Blanthorne, however, promised to sort his goods so as to give every vehicle its full load after the first day.

The details of the test, the distribution of the work and the schedules were all prepared with that thoroughness, clarity and accuracy which have become characteristic of Secretary Butler's work. The gathering of the results of each day's work was, however, another matter, and with the test but half completed only a general idea of how the vehicles are doing can be given.

The following table gives the details of the vehicles engaged, the tare weights given being the actual official figures recorded from the scales:

Entrant.	Vehicle.	Horse-power.	Tare weight.	Load capacity.	Class.	Operator.
2. Charles Rockliff.	G. Baggage wagon.	15	4,092	2,000	3	Charles Miller.
3. Union Motor Truck Co.	G. Stake truck.	20	6,851	4,000	4	C. Blomer.
4. Knox Automobile Co.	G. Delivery wagon.	8	2,005	700	1	J. De Gowan.
5. Knox Automobile Co.	G. Delivery wagon.	8	2,280	1,100	2	A. G. Gruendler.
6. Knox Automobile Co.	G. Baggage wagon.	16	2,815	2,100	3	J. E. Cowan.
7. Ochs Motor Works.	G. Delivery wagon.	4½	1,225	500	1	R. L. Lockwood.
8. Ochs Motor Works.	G. Delivery wagon.	4½	1,225	500	1	S. M. Smith.
9. Consolidated Motor Co.	G. Baggage wagon.	7	3,450	3,500	3	Joseph Mallon.
10. Carlson Motor Vehicle Co.	G. Baggage wagon.	20	2,830	2,000	3	C. A. Carlson.
11. Pope Motor Car Co.	E. Delivery wagon.	3	2,465	1,100	2	James Garrison.
12. Pope Motor Car Co.	E. Delivery wagon.	3	2,455	1,100	2	J. R. Kirkpatrick.
13. Lansien Motor Car Co.	E. Delivery wagon.	—	2,760	2,000	3	Dow B. Hughes.
14. Electric Vehicle Co.	E. Delivery wagon.	—	5,400	2,000	3	G. W. Gammon.
15. Electric Vehicle Co.	E. Truck.	—	6,700	5,000	5	J. A. Crittenden.
16. Canton Elec. Tractor Co.	E. Delivery wagon.	4	3,300	2,000	2	J. Laverne.
17. Fischer Motor Vehicle Co.	G. & E. Truck.	20	14,500	10,000	8	—
18. Commercial Automobile Co.	Steam truck.	25	14,100	10,000	8	—

Following are the sixteen regular routes of the American and Westcott Express Company over which the fifteen vehicles assigned to service for that concern are working. In some cases, it will be noticed, the schedule calls for a second trip over a short route, but the mileage given in each case is the estimated distance of the single trip. The exact distance covered will,

of course, be told by the odometers. The addresses mentioned in the long route itineraries are the stopping places for delivery or taking on merchandise.

Route 1. Madison Avenue Depot, 8 a. m., to Jamaica, L. I., via Brooklyn Bridge, 8 and 10 Fulton street, thence Dean street to 1,400 Fulton street, Fulton street to East New York Depot, Jamaica avenue to Jamaica, L. I. Returning via Richmond Hill and Myrtle avenue to 106 Broadway office, thence via Williamsburg Bridge to Madison Avenue Depot. Thirty miles.

Route 2. Madison Avenue Depot, 8 a. m., to Flushing, L. I., via Brooklyn Bridge, 8 and 10 Fulton street, 1,129 Myrtle avenue, through Melrose street to Flushing avenue, Grand street and Brooklyn Heights R. R. Line, via Corona to Flushing, returning via Brooklyn Heights R. R. Line and Grand

street, to 106 Broadway, Brooklyn; then via the Williamsburg Bridge to Madison Avenue Depot. Twenty-five miles.

Route 3. Madison Avenue Depot, 8 a. m.—West Side transfer service between Madison Avenue Depot and West One-hundred-and-twenty-fifth street, stopping at 683 and 315 Columbus avenue in both directions and repeat. Seven miles.



THE OLD ORDER AND THE NEW.

Route 4. Madison Avenue Depot, 8 a. m.—East Side transfer service between Madison Avenue Depot and One-hundred-and-thirty-eighth street, stopping at Seventy-second street and Third avenue and Eighty-sixth street and Lexington avenue in both directions and repeat. Eight miles.

Route 5. Baggage service—Grand Central Station 8 a. m. First trip—Leave Depew Place at 8 a. m., deliver baggage from Fourteenth street to Maiden Lane, Fourth to Sixth aves., West Broadway to Mott street. Seven miles. Second trip—Leave Grand Central Depot 12 noon, baggage to Pennsylvania R. R. Depot, foot of West Twenty-third-st. Three miles. Third trip—Leave Grand Central Depot 2:30 p. m., baggage delivery to hotels, etc., Forty-second to Tenth sts., Fourth to Sixth avenues. Four miles.

Route 6. Madison Avenue Depot, 6 a. m. Merchandise delivery, Fourteenth to Thirty-fourth street, Third avenue to East River. Repeat. Four miles.

Route 7. Madison Avenue Depot, 8 a. m. Transfer service between Madison Avenue Depot and 65 Broadway, making all offices south of Forty-seventh street, two round trips, then to office at Fourth street and Lafayette Place for load to the depot. Seven miles.

Route 8. Madison Avenue Depot, 8 a. m. Merchandise delivery, from Forty-seventh to One-hundred-and-tenth street, Fifth avenue and Central Park to North River. Repeat. Six and a half miles.

Route 9. Madison Avenue Depot, 8 a. m. Merchandise delivery, Forty-seventh to One-hundred-and-tenth street, Fifth avenue and Central Park to East River. Repeat. Six and a half miles.

Route 10. Madison Avenue Depot, 8 a. m. Package delivery, Twenty-third to Fifty-ninth street, Fifth to Seventh avenue. Repeat. Four miles.

Route 11. Madison Avenue Depot, 8 a. m. Package delivery, Fourteenth to Thirty-fourth street, Fifth to Seventh avenue. Repeat. Three and a quarter miles.

Route 12. Madison Avenue Depot, 8 a. m. Package delivery, Fourteenth to Thirty-fourth street, Second to Fourth avenue. Repeat. Three and a quarter miles.

Route 13. Madison Avenue Depot, 8 a. m. Package delivery, Houston to Fourteenth street, Third avenue and Bowery to East River. Repeat. Four miles.

Route 14. Madison Avenue Depot, 8 a. m. Merchandise delivery, Fourteenth to Thirty-fourth street, Seventh avenue to North River. Repeat. Four and a half miles.

Route 15.—Madison Avenue Depot, 8 a. m. Market delivery to Fulton Fish Market, bring load of fish from market to depot, then make trips between Madison Avenue Depot and 443 West One-hundred-and-twenty-fifth street, stopping at 315 and 683 Columbus avenue in both directions. Thirteen miles.

Route 16. Madison Avenue Depot, 8 a. m. Market delivery of fish to Fulton Fish Market, bring load of fish from market to depot, then make trips between Madison Avenue Depot and One-hundred-and-thirty-eighth

street, stopping at Third avenue and Seventy-second street and Lexington avenue and Eighty-sixth street in both directions. Thirteen miles.

In order to have all vehicles tested as nearly as possible under the same conditions a great deal of work was done planning a schedule of routes that would give each car a different task each day, and each of those in the same classes the same tasks as the others of that class. This cleverly devised route schedule, as arranged beforehand, showing the assignments of each day, is given below, and what the allotment for each car was can be ascertained by reference to the list of routes:



CANTONO ELECTRIC TRACTOR'S FIRST TRIP.

SECOND CLASS—OVER 1,000 AND UNDER 2,000 POUNDS.

(April 4.)

No. 1. Commercial Motor Co., Route No. 6.
No. 5. Knox Automobile Co., Route No. 8.
No. 11. Pope Motor Car Co., Wagon No. 1, Route No. 9.
No. 12. Pope Motor Car Co., Wagon No. 2, Route No. 10.
No. 16. Cantono Electric Tractor Co., Route No. 13.

(April 5.)

No. 1. Commercial Motor Co., Route No. 8.
No. 5. Knox Automobile Co., Route No. 6.
No. 11. Pope Motor Car Co., Wagon No. 1, Route No. 10.
No. 12. Pope Motor Car Co., Wagon No. 2, Route No. 9.

FIRST CLASS—LOAD UNDER 1,000 POUNDS.

(April 4.)

No. 4. Knox Automobile Co., Route No. 8.
No. 7. Olds Motor Works, Route No. 9.
No. 8. Olds Motor Works, Route No. 10.

(April 5.)

No. 4. Knox Automobile Co., Route No. 10.
No. 7. Olds Motor Works, Route No. 8.
No. 8. Olds Motor Works, Route No. 9.

(April 6.)

No. 4. Knox Automobile Co., Route No. 9.
No. 7. Olds Motor Works, Route No. 10.
No. 8. Olds Motor Works, Route No. 8.

(April 7.)

No. 4. Knox Automobile Co., Route No. 11.
No. 7. Olds Motor Works, Route No. 12.
No. 8. Olds Motor Works, Route No. 13.

(April 8.)

No. 4. Knox Automobile Co., Route No. 12.
No. 7. Olds Motor Works, Route No. 13.
No. 8. Olds Motor Works, Route No. 11.

(April 9.)

No. 4. Knox Automobile Co., Route No. 13.
No. 7. Olds Motor Works, Route No. 11.
No. 8. Olds Motor Works, Route No. 12.

No. 16. Cantono Electric Tractor Co., Route No. 14.

(April 6.)

No. 1. Commercial Motor Co., Route No. 9.
No. 5. Knox Automobile Co., Route No. 10.
No. 11. Pope Motor Car Co., Wagon No. 1, Route No. 8.
No. 12. Pope Motor Car Co., Wagon No. 2, Route No. 6.
No. 16. Cantono Electric Tractor Co., Route No. 12.

(April 7.)

No. 1. Commercial Motor Co., Route No. 10.
No. 5. Knox Automobile Co., Route No. 9.
No. 11. Pope Motor Car Co., Wagon No. 1, Route No. 6.
No. 12. Pope Motor Car Co., Wagon No. 2, Route No. 8.
No. 16. Cantono Electric Tractor Co., Route No. 11.

(April 8.)

No. 1. Commercial Motor Co., Route No. 11.
No. 5. Knox Automobile Co., Route No. 12.
No. 11. Pope Motor Car Co., Wagon No. 1, Route No. 13.
No. 12. Pope Motor Car Co., Wagon No. 2, Route No. 14.
No. 16. Cantono Electric Tractor Co., Route No. 9.

(April 9.)

No. 1. Commercial Motor Co., Route No. 12.
 No. 5. Knox Automobile Co., Route No. 11.
 No. 11. Pope Motor Car Co., Wagon No. 1.
 Route No. 14.
 No. 12. Pope Motor Car Co., Wagon No. 2.
 Route No. 13.
 No. 16. Cantano Electric Tractor Co., Route No. 6.

THIRD CLASS—LOAD OVER 2,000 AND UNDER 3,000 POUNDS.

(April 4.)

No. 2. Chas. Rockliff, Route No. 1.
 No. 13. Landsen Motor Co., Route No. 2.
 No. 10. Carlson Motor Vehicle Co., Route No. 3.
 No. 14. Electric Vehicle Co., Route No. 4.

No. 14. Electric Vehicle Co., Route No. 2.
 No. 6. Knox Automobile Co., Route No. 3.
 No. 9. Consolidated Motor Co., Route No. 4.

(April 9.)

No. 2. Chas. Rockliff, Route No. 7.
 No. 13. Landsen Motor Co., Route No. 1.
 No. 10. Carlson Motor Vehicle Co., Route No. 2.
 No. 14. Electric Vehicle Co., Route No. 3.
 No. 6. Knox Automobile Co., Route No. 4.
 No. 9. Consolidated Motor Co., Route No. 5.

FOURTH CLASS—LOAD 4,000 POUNDS.

(April 4.)

No. 3. Union Motor Truck Co., Route No. 1.

(April 5.)

No. 3. Union Motor Truck Co., Route No. 2.

(April 5.)

No. 17. To Yonkers, making deliveries in Yonkers and returning with empties.

No. 18. To Flushing, via Thirty-fourth street ferry, making deliveries in Flushing and collecting empties on return.

(April 6.)

No. 17. To Flushing.
 No. 18. To Yonkers, returning with empties, two round trips.

(April 7.)

No. 17. To Yonkers, returning with empties, two round trips.
 No. 18. To Flushing.

(April 8.)

No. 17. City or South Brooklyn deliveries.
 No. 18. City deliveries.

(April 9.)

No. 17. City deliveries.
 No. 18. City or South Brooklyn deliveries.

The observers for the cars were: F. O. Willhoff, C. A. Schneider, C. J. Schaus, W. P. Abenbroth, W. Schmidt, L. F. Holden, T. Sullivan, Elmer Quade, C. P. Everhardt, T. J. Brannigan, F. W. Eveland, E. R. Mixer, P. M. Heldt, A. L. Clough, H. B. Eaubank, Jr., Louis Sanders, J. Bentley.

Of these the first four are volunteers from the mechanical school of Columbia University, and the next six are expressmen who were permitted to volunteer.

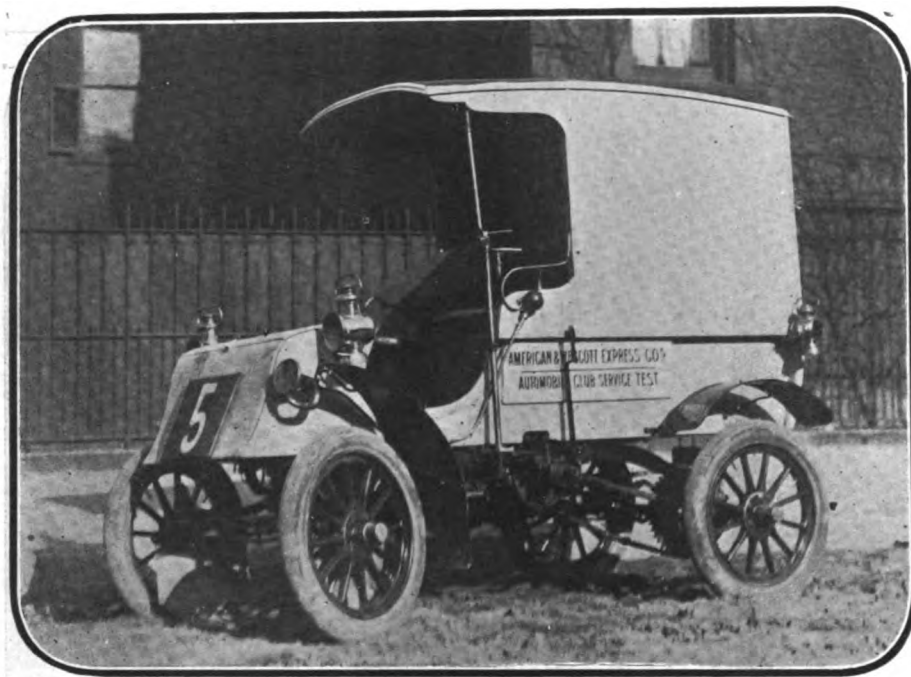
The following table enables one to see how just was the distribution of the tasks, the vehicles of each class being given during the week almost without exception the same route assignments:

First class:	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
No. 4.....	8	10	9	11	12	13
No. 7.....	9	8	10	12	13	11
No. 8.....	10	9	8	13	11	12
Second class:						
No. 5.....	8	6	10	9	12	11
No. 11.....	9	10	8	6	13	14
No. 12.....	10	9	6	8	14	13
No. 16.....	13	14	12	11	9	6
Third class:						
No. 2.....	1	2	3	4	5	7
No. 13.....	2	3	4	5	7	1
No. 10.....	3	4	5	7	1	2
No. 14.....	4	5	7	1	2	3
No. 6.....	5	7	1	2	3	4
No. 9.....	7	1	2	3	4	5
Fourth class:						
No. 3.....	1	2	16	15	5	7
Fifth class:						
No. 15.....	2	1	15	16	7	5

Of the seventeen that started on the first day, all except three, the Landsen electric, the Electric Vehicle Co. truck and the Commercial Automobile Co.'s steam truck, got in to the garage early in the evening. Two of the others got in late, and the steam truck did not return until Tuesday afternoon. The two electrics that were late the first day went to Flushing, L. I., while the steam truck went to Yonkers and stayed there for a while. The electrics had trouble because of a misunderstanding. The plant that had agreed to be ready to charge the electrics at Flushing could not do so, and they had to be towed to charging plants.

On Tuesday sixteen of the original seventeen started, and of these the Carlson wagon concluded early in the day to withdraw. All finished their day's work early on Tuesday excepting the Electric Vehicle Co.'s No. 15, which was sent to Jamaica, and again had trouble through being unable to renew its batteries, and after various adventures reached the garage at 11 p. m.

The electric vehicles were stored at night



A KNOX WAITING FOR A LOAD.

No. 6. Knox Automobile Co., Route No. 5.
 No. 9. Consolidated Motor Co., Route No. 7.

(April 5.)

No. 2. Chas. Rockliff, Route No. 2.
 No. 13. Landsen Motor Car Co., Route No. 3.
 No. 14. Electric Vehicle Co., Route No. 5.
 No. 10. Carlson Motor Vehicle Co., Route No. 4.
 No. 6. Knox Automobile Co., Route No. 7.
 No. 9. Consolidated Motor Co., Route No. 1.

(April 6.)

No. 2. Chas. Rockliff, Route No. 3.
 No. 13. Landsen Motor Car Co., Route No. 4.
 No. 10. Carlson Motor Vehicle Co., Route No. 5.
 No. 14. Electric Vehicle Co., Route No. 7.
 No. 6. Knox Automobile Co., Route No. 1.
 No. 9. Consolidated Motor Co., Route No. 2.

(April 7.)

No. 2. Chas. Rockliff, Route No. 4.
 No. 13. Landsen Motor Co., Route No. 5.
 No. 14. Electric Vehicle Co., Route No. 1.
 No. 10. Carlson Motor Vehicle Co., Route No. 7.
 No. 6. Knox Automobile Co., Route No. 2.
 No. 9. Consolidated Motor Co., Route No. 3.

(April 8.)

No. 2. Chas. Rockliff, Route No. 5.
 No. 13. Landsen Motor Car Co., Route No. 7.
 No. 10. Carlson Motor Vehicle Co., Route No. 1.

(April 6.)

No. 3. Union Motor Truck Co., Route No. 16.

(April 7.)

No. 3. Union Motor Truck Co., Route No. 15.

(April 8.)

No. 3. Union Motor Truck Co., Route No. 5.

(April 9.)

No. 3. Union Motor Truck Co., Route No. 7.

FIFTH CLASS—LOAD 5,000 POUNDS.

(April 4.)

No. 15. Electric Vehicle Co., Route No. 2.

(April 5.)

No. 15. Electric Vehicle Co., Route No. 1.

(April 6.)

No. 15. Electric Vehicle Co., Route No. 15.

(April 7.)

No. 15. Electric Vehicle Co., Route No. 16.

(April 8.)

No. 15. Electric Vehicle Co., Route No. 7.

(April 9.)

No. 15. Electric Vehicle Co., Route No. 5.

EIGHTH CLASS—LOAD 10,000 POUNDS.

(April 4.)

No. 17. To Flushing via Thirty-fourth street ferry, making deliveries in Flushing and collecting empties on return.

No. 18. To Yonkers, making deliveries in Yonkers and returning with empties.

at Forty-ninth street and Eighth avenue, while the gasoline and steam vehicles were kept at No. 154 East Fifty-seventh street.

The following summary gives a general idea of how the test had progressed up to Wednesday night:

MONDAY.

No. 2. Rockliff, Route No. 1; left 8:40 a. m.; arrived 5:52 p. m.; load, 900 pounds baggage; covered 34 $\frac{1}{2}$ miles.

No. 3. Union Truck, Route No. 1; left 8:08 a. m.; arrived 6:16 p. m.; load, 4,000 pounds merchandise and pig iron; covered 34 $\frac{1}{2}$ miles.

No. 4. Knox, Route No. 8; left 8:20 a. m.; arrived 5:05 p. m.; loaded with merchandise (packages); 43 deliveries; covered 27 $\frac{1}{4}$ miles.

No. 5. Knox, Route No. 9 (3 trips); left 9:20 a. m.; arrived at 6 p. m.; loaded with merchandise (packages); covered 34 miles; 52 deliveries.

No. 6. Knox Baggage Wagon, Route No. 5 (4 trips); loaded with baggage; 2,100 pounds; left 8:22 a. m.; arrived at 5:30 p. m.; covered 28 $\frac{1}{4}$ miles.

No. 7. Oldsmobile, Route No. 10 (4 trips); left 8:22 a. m.; arrived 6:06 p. m.; loaded with packages; 27 deliveries; covered 26 miles.

No. 8. Oldsmobile, Route No. 9 (4 trips); left 9 a. m.; arrived at 5:50 p. m.; packages; 28 deliveries; covered 27 miles.

No. 9. Consolidated Truck, Route No. 7; left 8:45 a. m.; arrived at 7:10 p. m.; baggage; 1,400 pounds; covered 25 $\frac{1}{2}$ miles; 37 deliveries.

No. 10. Carlson Baggage Wagon, Route No. 3 (one trip); merchandise; left 9:20 a. m.; arrived 11:08 a. m.; 6 deliveries; covered 11 $\frac{1}{4}$ miles.

No. 11. Pope, Route No. 10; left 8:45 a. m.; arrived 6 p. m.; loaded with 950 pounds of merchandise; three trips; covered 22 $\frac{1}{2}$ miles; 41 deliveries.

No. 12. Pope, Route No. 9; start 8:30 a. m.; return 5: p. m.; 700 pounds merchandise (packages); 40 deliveries of 60 packages; covered 36 $\frac{1}{2}$ miles.

No. 13. Lansden, Route No. 2; start 9:05 a. m.; return 10:05 p. m.; 1,700 pounds baggage to Flushing; covered 21 $\frac{1}{2}$ miles; was towed last two miles.

No. 14. Electric Vehicle Co., Route No. 4; start 8:45 a. m.; return 6:41 p. m.; baggage; three trips; covered 37 $\frac{1}{4}$ miles.

No. 15. Electric Vehicle Co., Route No. 2; start 8:25 a. m.; return 11:20 p. m.; loaded with 1,000 pounds baggage and merchandise to Fulton street, Brooklyn, and there loaded with 5,000 pounds pig iron; covered 26 miles; had to be towed about eight miles to charging station.

No. 16. Cantono, Route No. 13; start 8:45 a. m.; return 6 p. m.; three trips; covered 29 miles; small express packages.

No. 17. Fischer, Route No. 2; left New York 6 a. m.; arrived Flushing 7:58 a. m.; 60 half barrels of beer, 12,000 pounds; made deliveries and picked up empties; left Flushing 3:14 and arrived at brewery with 4,000 pounds empties at 4:40 p. m.

No. 18. Commercial, Route to Yonkers; stayed there all night; returned 3:30 p. m. Tuesday.

TUESDAY.

No. 2. Rockliff, Route No. 2; 1,930 pounds of iron and merchandise; 34 miles.

No. 3. Union, Route No. 2; 3,500 pounds of iron and boxes; 35 miles.

No. 4. Knox, Route No. 10 (4 trips, feed, etc.); 1,200 pounds; 22 miles.

No. 5. Knox, Route No. 6; 22 $\frac{3}{4}$ miles.

No. 6. Knox, Route No. 7; merchandise; 31 $\frac{1}{2}$ miles.

No. 7. Olds, Route No. 8; merchandise; 32 miles.

No. 8. Olds, Route No. 9; merchandise; 27 $\frac{3}{4}$ miles.

No. 9. Consolidated, Route No. 1; 2,278 pounds merchandise, veal and iron; 55 $\frac{1}{4}$ miles.

No. 10. Carlson, Route No. 4; withdrew.

No. 11. Pope, Route No. 19; merchandise (4 trips); 45 $\frac{1}{2}$ miles.

No. 12. Pope, Route No. 9; packages and freight, 500 pounds; 27 miles.

No. 13. Lansden, Route No. 3; freight transfer between offices; 535 pounds; 33 miles.

No. 14. Electric Vehicle Co., Route No. 5; baggage (4 trips); 6,400 pounds; 25 miles.

No. 15. Electric Vehicle Co., Route No. 1; merchandise to Jamaica; 34 $\frac{1}{2}$ miles.

No. 16. Cantono, Route No. 14; trunks and boxes; 23 miles.

No. 17. Fischer, Route to Yonkers; 50 half barrels, 10 $\frac{1}{4}$ barrels of beer, 6 $\frac{1}{2}$ tons, returning light; 32 miles.

WEDNESDAY.

No. 2. Union, Route No. 2; start 7:33; return 6:30; load, general merchandise; covered 43 $\frac{1}{2}$ miles; service stops, 40.

No. 3. Union, Route No. 16; left 7:38; returned 5:08; load, 3,545 pounds fish (five passengers); covered 33 $\frac{1}{2}$ miles; service stops, nine.

No. 4. Knox, Route No. 3; start 8; return 5:35; load (four trips), merchandise; covered 40 $\frac{1}{2}$ miles; service stops, 57.

No. 5. Knox, Route No. 10; left 8:05; returned 5:20; load, packages; 4 trips; 510, 200, 400, 50 pounds; covered 21 miles; service stops, 53.

No. 6. Knox, Route No. 1; left 8:05; return 2:15; load, 2,100 pounds meat; covered 35 $\frac{1}{4}$ miles; service stops, 7.

No. 7. Olds, Route No. 10; start 8:30; return 6; load (4 trips), 210, 300, 400, 350 pounds; covered 33 miles; service stops, 50.

No. 8. Olds, Route No. 8; start 8:15; return 6:50; three trips; covered 39 miles; service stops, 54.

No. 9. Consolidated, Route No. 2; start 8:17; return 3:35; load, 2,600 pounds pig iron and meat; covered 32 $\frac{1}{2}$ miles; service stops, 4.

No. 11. Pope, Route No. 8; start 8:35; return 5:15; load (three trips), 978, 500, 150 pounds; covered 28 $\frac{1}{2}$ miles; service stops, 37.

No. 12. Pope, Route No. 6; start 8:15; return 5:45; load (five trips), merchandise; covered 29 $\frac{1}{4}$ miles; service stops, 31.

No. 13. Lansden, Route No. 4; made trips all right; no record returned.

No. 14. Electric Vehicle Co., Route No. 7; start 8:30; return 6:25; load, general merchandise; covered 27 $\frac{1}{2}$ miles; service stops, 34.

No. 15. Electric Vehicle Co., Route No. 15; start 8:35; return 6:10; load, 4,300 pounds fish; covered 32 miles; service stops, 21.

No. 16. Cantono, Route No. 12; start 8:10; return 5:20; load, 1,500 pounds merchandise; five trips; 2,250 pounds; 22 $\frac{1}{2}$ miles; service stops, 35.

No. 17. Fischer, Route to Flushing; 2 hogsheads, 37 half barrels, 6 quarters and 4 men; 9,600 pounds beer; left 6:11; arrive Flushing, 7:59; service stops, 24; covered 22 miles; arrive 3:08.

Bridgeporters Banquet and Elect.

Several novel features marked the second annual banquet of the Bridgeport Automobile Club, held at Bridgeport, Conn., on Monday night. Some forty-five guests discussed a repast, the menu for which was printed on a piece of cardboard cut into a very good semblance of an up-to-date gasoline car. The list of speakers and the topics allotted to them were printed on a separate card, with humorous comments accompanying them. That set opposite A. L. Riker's name, viz., "Am I or Am I Not Sorry That I Missed Bath?" was much appreciated by survivors of the endurance run to Buffalo last fall.

The officers placed in nomination a few weeks ago were elected as follows: President, Frank W. Bolande; vice-president, F. L. Hitchcock; secretary, Dr. Dow R. Beebe; treasurer, Frank T. Staples; governor for one year, M. V. Doud; governors for two years, T. M. Macdonald, Gregory S. Bryan and A. L. Riker.

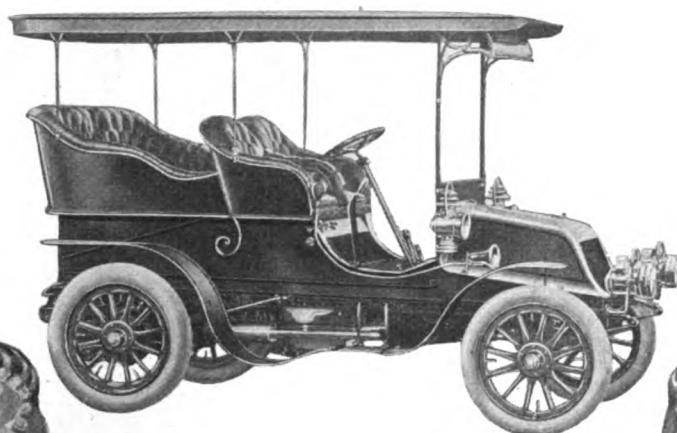
Must Carry Only One Number.

A bill that has attracted too little attention is one introduced in the New Jersey Senate a short time ago, and which passed both branches of the legislature last week.

It amends the automobile bill of last year by providing that while driving through the State no numbers shall be displayed on the machine except the New Jersey license number. Often motorists who should be arrested for violating the speed law will display two or three numbers on the rear end of the machine, and while the officer is trying to find out which one is the New Jersey number the driver gets too far away to be apprehended, said the father of the bill in bringing it before the body.

The Kane automobile bill which has been struggling in the Rhode Island Legislature all during this session has been practically shelved. As a result, automobiles in the little State are just where they always have been, that is, covered by the general highway law, which is just where they should be. If the Rhode Islanders are wise they will fight for that principle.

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COMMERCIAL VEHICLES

H. P. Maxim's Paper Takes up the Edison and Manchester Box Types of Batteries— An Apparent Cost Reduction Shown

After completing his tables relating to the expense of a vehicle fitted with the Exide battery, Mr. H. P. Maxim, in his exhaustive paper read before the Automobile Club of America, proceeded to treat first the Edison and next the Manchester box type of Plante battery in a similar manner. The result is a marked saving over the Exide, which is now in almost general use. It was pointed out, however, that, while the figures on the Exide battery are based on the actual and extensive working of vehicles fitted with them, those relating to the Edison and Manchester box are largely theoretical, it being impossible to adduce like practical performances in support of them. This portion of Mr. Maxim's paper follows:

HORSE SERVICE COSTS.

Reliable data on the costs of horse service is extremely difficult to get at. Some services are based upon the strictest economy regardless of any other consideration, while others are based upon elegance of equipment, regardless of cost. Every stage between these two exists, and no two seem to be exactly comparable, especially in the cases of the smaller vehicles. On a purely mathematical basis, it is conceivable that, it would be difficult to prove the electrically propelled vehicle as cheap, broadly speaking, as the horse propelled vehicle. Practice, however, indicates that it is the case in large cities. In almost every instance, where electric vehicles have been substituted for horse vehicles, the service has been more satisfactory. Whether this satisfaction is derived from actual reduction in costs, greater convenience, or what, is impossible to say positively. We simply know that it is the case. In some places, it is claimed to be very much cheaper than horse service, while in other places, barring the erratic, it is claimed that it costs about the same, or possibly more, but is so much more satisfactory as to compensate. It is very probable that, as far as money saving is concerned, in light department store wagons there would not be as great an advantage as in heavier trucking, since in the latter service we find continual instances where things become possible, which with horses were impossible. This of course entirely upsets any question of direct cost comparison.

In the instances we have heard of electric vehicles being condemned on the score of cost of up-keep, it has been almost universally due to extraordinary battery and tire expenses. Except in erratic cases, where gross ignorance and carelessness prevail, the responsibility we know to be in the inadequate batteries and tires furnished. Where these two elements are of decent proportions

there is no excuse for the cost of maintenance exceeding the figures which have been given. Indeed there are cases where a little higher skill and intelligence than the average having been brought to bear on the vehicle, maintenance expenses per year have been considerably below the figures given. Since it is not a general rule, however, the average rather than they, have been given. Now to turn to the consideration of the relationship existing between the elements making up maintenance and the possible effect of improvements now under contemplation.

WHERE IMPROVEMENT IS POSSIBLE.

It is evident from Table No. 1, that the larger share of the expense of maintaining a department store wagon, the one ton size in the table, is due to battery, tire, and depreciation items. The same is the case with the three-ton and five-ton trucks. The three items amount to, roughly, 70 per cent. of the total maintenance expense. It is plain, therefore, that future improvements should lie in the direction of these three conditions. From the details of the repairing of a battery, it is apparent that the cost of the new plates, the losses sustained on account of the breakages of rubber jars, and the labor involved in doing cleaning, are mainly responsible for the magnitude of the battery account. It is plain that if a battery could be obtained which would require less cleaning, or the plates of which would last longer, or the jars of which would not break, the maintenance expense would be greatly lessened. Developments along these lines are under way and, we have two batteries at present being weighed in the balance for the determination of these factors. These are the battery of Mr. Edison, and one of the old type of Plante batteries which has again come to the front for commercial vehicles when used in connection with a new negative plate.

This latter is a lead battery of conventional form, but, owing to its construction, its active material sheds less rapidly than in the pasted type of battery used in existing vehicles. The plates, therefore, last longer. The battery costs the same, however, and it requires rubber jars the same as the existing battery, so that the reduction it promises is in the frequency of renewal of the plates. The battery in the main is an old one, having the most creditable record of any storage battery that has ever been constructed.

THE NEW EDISON BATTERY.

In the case of the other battery, the Edison, it is not quite the same. The manufacturers claim that the plates need no renewing in the sense which we are considering. They tell us that the battery is indestructible, meaning, of course, as apparatus generally is considered indestructible. Assuming that this is so, let us see what it would mean. The purchase of new plates would be avoided, the labor connected with cleaning would be avoided, and the losses due to broken rubber jars would be avoided. The Adams Express Company is operating at the present time, four of these batteries in four of their thirty-four electric wagons. They have been in ser-

vice some four months to date, and there is every reason to believe that up to the present time all of the manufacturers' claims have been equaled. It must not be lost sight of, however, in considering this, that even one year's work in actual service has not yet been done, and that it is solely the manufacturers' claims, and what we know we have a right to expect from the theory of the battery that forms the basis from which we are reasoning. The battery is, theoretically, directly in the proper line of improvement, and regardless of anything else, is therefore worthy of our most careful consideration.

In calculating the probable performance of this battery, in order to compare it with existing batteries, we find there are two features in which the battery suffers. These are its high price, and the consequent elevating of the interest charges against it, and the large amount of charging energy which is lost in recharging, and which elevates the charging current account against it.

INCREASES FIRST COST OF VEHICLE.

On the score of price, the status of a wagon fitted with this battery may be judged when we say that if given the same watt hour capacity, a 2,000 pound wagon which now sells at \$2,500 would have to sell at \$3,000. A 3-ton wagon, the average price of which is \$3,700, would have to sell at \$4,222, while a 5-ton truck, the normal price of which is \$4,000, would have to sell at \$4,820. The interest account upon these higher figures, of course, increases the cost per vehicle mile and per ton mile. These will be taken up later.

In this connection should be mentioned the question of weight saving. Obviously, if the battery weighed enough less than the corresponding existing batteries, it would be possible to reduce costs in the vehicle. For example, if enough weight were saved, we might use the next smaller size tire axles, wheels and springs. As a matter of fact, however, the actual saving is not enough to make this practical. In a 2,000 pound capacity wagon the saving in battery weight would be only 375 pounds, not enough to warrant any reduction in tire or axle dimensions. In the 3-ton wagon the saving would be 650 pounds, while in the 5-ton it would be 740 pounds. Neither of these would amount to as much as the variations in load which have to be provided for, so that it does not seem reasonable for us to count upon any reduction in the vehicle parts as the result of this battery.

On the score of charging current, the data available from actual service has been taken. Laboratory data in profusion is of course available, but it is desired to confine these figures to those taken from actual practice. As far as can be judged in the vehicles in use, we should expect them to require about 66 per cent. more energy to charge them than it requires to charge vehicles with existing lead batteries. In a 2,000 pound wagon this means \$204 per annum instead of \$122.70. In a 3-ton wagon it means \$295 instead of \$177.12, while in a 5-ton truck it means \$310 instead of \$186.

On the score of depreciation of the battery, an arbitrary figure must be assumed since there is nothing positively known on the subject as far as service conditions go, and the entire matter must be taken upon a basis of the claims of the manufacturer. As indestructibility is claimed, the battery has been classed with the rest of the vehicle which is indestructible in the same sense, and 10 per cent per annum taken.

There is a point in this connection which should be borne in mind. This is that, on the basis to a ten years' life with the Edison battery, the entire vehicle, battery and all, would be done for at the end of the ten years, whereas, in the case of the existing battery, and our basis of calculation, the battery itself would be in a good state of repair at the end of the ten years even though its vehicle were entirely done for. This variation is, however, not much more than are several others which cannot be avoided in trying to strike an average of widely varying figures, so it is neglected.

PROBABILITY OF REPAIRS.

On the score of repairs of the Edison battery, it would seem to be fair to expect more repairs upon it than there would be on the vehicle part, since the latter have had the benefit of long experience in service and the battery has had very little. The vehicle repair figure seems to be something about 4 per cent. on the price of the apparatus. It would not seem unfair to take 6 per cent. for the battery. Six per cent. on \$990, the price of an Edison battery of equal capacity to the existing battery in a 2,000 pound wagon, would be \$59.40 per annum, or 6.88 per vehicle mile.

Now to compare the performance of vehicles fitted with Edison batteries and the performances when fitted with Exide batteries. Tire maintenance, vehicle repairs, and vehicle depreciation would be unchanged. In Table No. 2 the figures corresponding to Table No. 1 show the relationship.

TABLE NO. 2.
RELATION BETWEEN ELEMENTS OF COST OF MAINTENANCE WAGONS
FITTED WITH EDISON BATTERIES.

Elements.	1 Ton wagon.		3 Ton wagon.		5 Ton wagon.	
	Veh. ml.	Per ct.	Veh. ml.	Per ct.	Veh. ml.	Per ct.
Battery department and repair....	1.84	16.7	3.24	15.8	4.36	16.3
Tires	2.09	19.0	4.37	21.3	6.05	22.6
Depreciation	2.12	19.3	3.86	18.8	4.84	18.1
Interest	1.74	15.8	3.20	15.6	4.18	15.6
Charging current	2.30	21.4	4.26	20.8	5.20	20.1
Repairs .....	.85	7.8	1.54	7.7	1.93	7.3
Total	11.00c.	per V. M.	20.47c.	per V. M.	26.75c.	per V. M.
			10.23c.	per T. M.	7.64c.	per T. M.

A comparison between these two tables indicates at once a marked change in the relationships between the different elements of maintenance expense. The totals indicate a net gain per ton mile for the Edison battery amounting to quite a considerable amount, assuming that the generous assumptions we have made for it are anywhere near the truth. The gain would of course be much higher than it is were it not for the higher price and the greater amount of charging current necessary. In the 2,000

pound wagon this gain is 13 per cent, while in the three-ton wagon it is 12 per cent, and on the five-ton truck 12½ per cent.

In considering this gain the question of the other battery referred to comes up. This battery is known as the Manchester box type. It has a strictly Planté positive plate, and what is called a box negative plate, and represents a type of battery which is standard in stationary work. It is made by the same makers as make the Exide battery—the Electric Storage Battery Company, of Philadelphia. It is unquestionably the longest lived and most rugged lead storage battery in existence.

THE PLANTE TYPE REDIVIVUS.

Before the advent of the present form of pasted plate, it was the standard for automobile work. Having a greater weight per unit of capacity, however, than the pasted, it eventually became superseded for pleasure work, and when the commercial wagon came along it was inherited by it. It is now up for consideration again, since the fact has come to be generally understood that a little more battery weight in a business wagon is not as serious a matter as battery repair expense.

From records in existence of the performance of this battery, maintenance expenses have been worked out in the same manner as those of the Exide and Edison battery. The important details are as follows.

The number of day's work which the positive plates would be good for would be somewhere about 400. We have taken the Exide as 288, it will be remembered. The number of days' work from the new negative plates is doubtful, but from such records as we have it is probable that a proportionately greater life for the new negative over the existing Exide negative would follow as between the life of the Manchester positive and the Exide positive.

LIFE OF POSITIVE PLATES.

Four hundred days for the positives means 12,000 miles. The yearly mileage be-

per year, which, of course, materially reduces the labor, supplies, breakage of separators, and rubber jar charges. The maintenance of this battery would probably be something in the vicinity of the following for a 2,000 pound wagon:

		Existing Exide.
New positive plate.....	\$89.00	\$155.00
New negative plates.....	48.30	84.00
Rubber separators broken in handling.....	4.72	4.55
Rubber jars broken in service and handling....	4.72	4.55
New wood separators....	21.70	21.70
Labor	38.90	65.00
Supplies	37.20	48.50
Total per annum.....	\$258.67	\$404.85

This brings the vehicle mile to 3c. when the exide is 4.68c.

In the case of the three ton wagon the details would probably be something as follows:

		Existing Exide.
New positive plates.....	\$124.00	\$217.00
New negative plates	67.50	117.50
New wood separators....	26.50	36.60
Rubber separators broken in handling.....	6.50	6.37
Rubber jars broken in service and handling...	32.80	32.80
Labor	53.40	92.50
Supplies	52.00	67.80
Total per annum.....	\$362.70	\$570.57

LOW BATTERY MAINTENANCE CHARGE.

This brings the battery maintenance charge to run the vehicle a mile 5.25c, where the Exide is 8.25c. In the case of the five-ton truck the figures would probably be very close to the following:

		Existing Exide.
New positive plates.....	\$140.00	\$244.00
New negative plates.....	76.00	132.00
New wood separators....	29.70	41.00
Rubber separators broken in handling	7.40	7.15
Rubber jars broken in service and handling..	35.00	35.00
Labor	59.50	102.00
Supplies	57.50	75.00
Total per annum.....	\$405.10	\$636.15

This brings the battery maintenance charge for a vehicle mile to 7c., where the Exide is 11.50c.

The weight of this battery would be approximately 30 per cent greater than the weight of the existing Exide battery, the same watt-hour capacity being assumed. This increase does not amount to much increase in the total weight of the vehicle with load, as will be seen from the following:

The 13-plate MV cells in a 2,000 pound wagon weigh 1,640 pounds. The entire vehicle weighs 5,200 pounds. Loaded, this becomes 7,200 pounds. The cells are then 22.8 per cent of this total weight. When the new Manchester type of battery is used the battery weight would be increased about 490 pounds, which is just 6.9 per cent increase in the total weight, which, for instance, the tires, axles and springs must bear. It, of course, amounts to something, but it is not enough to make it necessary to use the next larger size of axles or tires. In the larger trucks it is much less than this,

being but 3.7 per cent increase in the total weight of the five-ton truck, loaded.

The price of the battery is the same per watt-hour capacity, so that all other charges in the maintenance of the vehicle will remain the same as in the existing Exide battery, except the charging current, which is but a negligible amount greater, due to the slight increase in the total weight of the vehicle.

Arranged in the same manner as in the other tables, the relation between the different elements of maintenance expense appear as is shown in table No. 3:

TABLE NO. 3. RELATION BETWEEN ELEMENTS OF COST OF MAINTENANCE WAGONS FITTED WITH MANCHESTER-BOX BATTERY.							
	1 Ton wagon.		3 Ton wagon.		5 Ton wagon.		
	Veh. mi.	Per ct.	Veh. mi.	Per ct.	Veh. mi.	Per ct.	
Battery	3.00	27.4	5.25	25.9	7.03	26.0	
Tire	2.00	19.1	4.37	21.6	6.05	22.0	
Depreciation	2.12	19.4	3.86	19.0	4.84	18.0	
Interest	1.45	13.3	2.67	13.2	3.46	13.0	
Charging current	1.42	13.0	2.57	12.7	3.24	12.0	
Repairs	0.85	7.8	1.54	7.6	1.93	7.0	
Total	10.93c.	per V. M.	20.36c.	per V. M.	26.55c.	per V. M.	
			10.18c.	per T. M.	7.44c.	per T. M.	

AN EQUAL GAIN SHOWN.

From this table we see that the net gain effected is practically identical with that of the Edison battery. For instance, in a 2,000 wagon it will cost for maintenance, as far as we are able to estimate, on a generous assumption for the battery, 11c. to run a vehicle a mile; while, with a Manchester box battery, it will cost 10.93c. In a three-ton wagon it would be 10.23c. to haul a ton a mile, as against 10.18c. with the Manchester. In the five-ton truck it would be 7.64c. to haul a ton a mile with the Edison battery, as against 7.40c. in the Manchester.

It suggests many very important possibilities. It must, however, be remembered that it is largely assumption, since we have no actual service wagon records to go back to in the case of the Edison battery, and only of the positive plates in the case of the Manchester battery. It would be very interesting to dwell further upon this matter, but there is not time for it if the other motive powers are to be considered. Before leaving the question of maintenance of the electric wagon we should, however, glance at two of the elements in maintenance expense which are important. These are the tire expenses and the depreciation and interest expenses.

In the case of the tires, it is seen that the tire repair expenses amount to 6.08c. for every mile a five-ton truck runs with three tons of load upon it. This seems high arbitrarily compared. Compared with the 25c. and 30c. per ton mile statements which are frequently heard, it is, however, a very decent figure. These extravagant ideas of the cost of the tire up-keep have been based upon early experience when, not only were inadequate tires furnished on vehicles, but the tires themselves were not as good as they are at the present time. We cannot, of course, entirely overlook the past, although in the question of rubber tires it ought not

blind us to the improvements of the present. On an up-to-date truck, a figure of 6.08c. per ton mile is a very conservative one, and, when the entire cost of a truck maintenance is taken into consideration, with the work that it performs, the tire cost will be seen to be well within the bounds of practicability.

TIRE MAINTENANCE 20 PER CENT.

This should not be taken, however, as indicating that the rubber tire is good enough. The table shows that in existing trucks the tire maintenance is approximately 20 per cent of the total maintenance of the vehi-

cle. This is not anywhere nearly the case in horse-drawn trucks where iron tires are used, the tire maintenance account being a very small percentage of the entire maintenance account. Certainly, a great reduction in the cost of operation would be possible if we could find a cheaper and more long lived tire material than rubber. Rubber is inherently expensive and so relatively fragile that, wherever the weight of service is very severe, a large amount of it is necessary. When we come to think of it, considering using anything else for tire material takes us on to entirely new ground, upon which we have never before trod. Never before have we had to move vehicles over uneven pavements by the revolving of their wheels, unless the latter were shod with rubber. Practically all vehicle propulsion accomplished to-day by the revolving of driving wheels, which are not shod with rubber, is done on the smooth and even surface of a steel rail.

CONDITIONS OF TIRE OPERATION.

The conditions under which a tire must operate in a wagon or truck are by no means easy ones. For example, a tire must give traction on hard and extremely uneven stone surfaces, regardless of whether the latter are wet or dry, covered with greasy mud or slippery ice. On the other hand, it must not stick or drag enough to seriously increase power consumption, as the iron tire does on hot asphalt in the summer time. It must be slightly elastic, so as to permit fair speeds over rough surfaces without unduly increasing traction, or injuring the vehicle. It must not slip sidewise, but must insure steering way under all circumstances. It should be comparatively noiseless.

Rubber very curiously meets every one of these requirements. It is a great pity that it is so expensive, and that a substitute for it cannot be produced. Iron has been tried for tire material on electric wagons, and is

being used in several cases to-day. It gives a precarious traction on uneven stone pavements except when the latter are covered with ice or snow. Under such circumstances it seems to give absolutely none at all. It is entirely non-jar-absorbing, and hence is very noisy, severe upon the vehicle and wasteful of power at speeds above six miles per hour on ordinary stone pavements. It drags seriously on softened asphalt and its frequent slipping makes steering doubtful enough to reduce to a certain extent the mobility which the vehicle would otherwise have.

RESULTS DIFFER IN SOME CITIES.

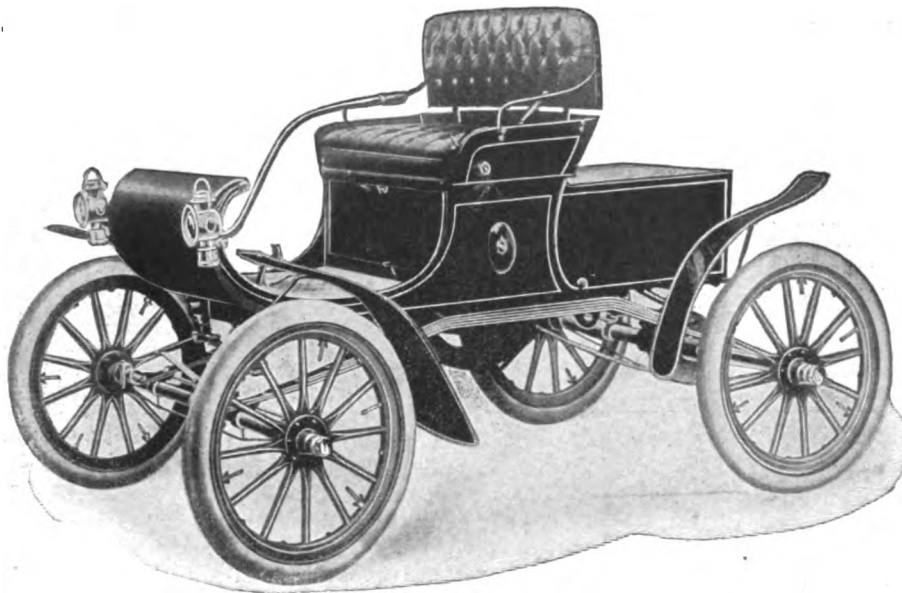
In some cities it seems to work better than in others. For example, in Pittsburg iron tires without sanding arrangements on a 2,000 pound capacity wagon have given entire satisfaction for upwards of three years, except during winter months. On the other hand, iron tires will slip in midsummer on Rector street, New York, and certain parts of West street. The paving in these places consists of peculiarly large sets which are extremely uneven and badly rounded over their tops, presenting about the surface what a lot of derby hats would present. Plentifully sanding the surface gives both traction and steering way, but it is not always practical to sand both the front and rear wheels at the critical moments when they need it. For instance, a stop in some places will require sand to get a start, where, if no stop had been made, no sand would have been needed. In the experience of the writer, hardly anything is more difficult to accomplish than the sanding of the wheels of a heavy truck on which there is a heavy load and which is standing stalled in a hollow or against the car track in West street, New York. The entire face of nature would seem to be able to be sanded with ease compared with the few square inches under the wheels where it is needed. The iron tire, to sum up, while by no means impractical, does not enable a motor vehicle to give its best performance. Very wide tires of the softest possible iron give better results than any other.

The other thing which the tables of maintenance expense suggest as worthy of consideration was depreciation. The depreciation and interest charges together in existing wagons seems to be something in the vicinity of 28 per cent. of the total maintenance expense. In wagons fitted with the Manchester box battery the estimates show 32 per cent. They are, of course, both determined by the price of the vehicle. Where the price of the vehicle lowered the total cost of maintenance would be considerably lowered, but the prices on electric wagons cannot be lowered as things stand to-day, and render the building of them a profitable business. Therefore, it would seem that, since the design has arrived at what is approximately a fixed and possibly a final one, the electric wagon must remain somewhere about where it is in so far as these two items in its maintenance expense are concerned.

It then remained to submit the gasoline vehicle to a similar scrutiny, and Mr. Maxim's deductions and conclusions concerning it, and his summing up of the entire subject, will be given in next week's *Motor World*.

*You see them wherever you go;
They go wherever you see them.*

As in all things of superior worth, there are certain features which distinguish an Oldsmobile from all other automobiles.



Oldsmobile Standard Runabout.

PRICE, \$650.00.

Some of these features are:

Its motor equipment, which represents the most advanced ideas and methods in gasoline engine construction. This alone places it in a class by itself.

Then note the ease with which the motor is started from the seat.

Note also the safety device which makes it impossible to start the motor until the spark has been retarded to a point where "back fire" is impossible.

These are but a few of the points we might mention. If you desire further particulars, see our nearest agent, or write direct to



Oldsmobile Light Delivery Wagon.
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Member of the Association of Licensed Automobile Manufacturers.

FOR RAIL OR ROAD

Novel Vehicle Which is Quickly Convertible from a Railway Car to an Automobile.

In self-propelled railway inspection cars a new and striking departure is inaugurated by a vehicle just produced by the Waltham Mfg. Co. It is a very close copy of the Orient Buckboard, with an arrangement for attaching a set of steel flanged tires to the wheels, without removing the pneumatic

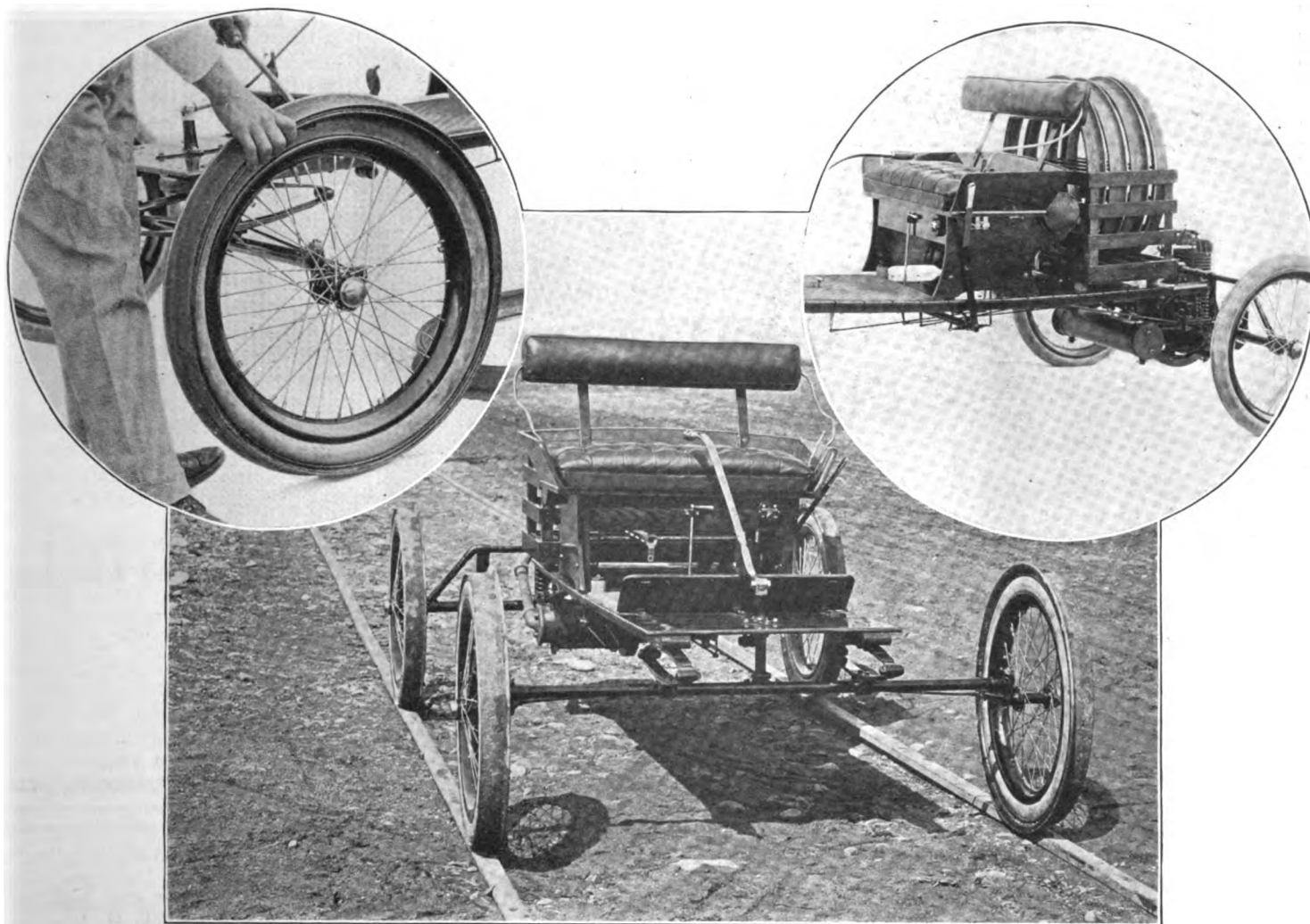
be lifted off, as shown in the photograph, without difficulty, by the aid of a screw-driver or other instrument.

The Waltham people believe that this principle of construction is going to be a very satisfactory thing, and might be serviceable for a great variety of uses in the future, even aside from inspection car purposes. For instance, in military operations any number of automobiles could be run with supplies on the rails to the nearest available point, and then, by removing the steel rims, be able to continue their drive on ordinary roads. For

NEW SALESROOMS FOR PIERCE

Fine Buildings Being Erected at Buffalo Which Will be Ready This Fall.

By next fall the George N. Peirce Co., Buffalo, N. Y., will have one of the finest salesrooms and garages in the country. Contracts have been let for the erection of two buildings on Main street, next to the Teck Theatre, on which a ten years' lease will be taken by the Pierce Company.



tires. Equipped in this manner, the machine is ready for a run on rails, while by simply detaching the steel tires an automobile pure and simple is had.

The car illustrated was built for the president of one of the railroads of Alabama, and has just been shipped to him. The novel feature already referred to consists of a cast steel flanged rim, made on its outside to fit the rails, and on the inside a curved surface to fit the periphery of the tire. When the tire is inflated, this auxiliary rim is held in place very rigidly. Under test, it has been found that 600 or 700 pounds side pressure cannot start it. In fact, the wheel itself can be crushed before it can be pushed out of this rim. In order to remove it, the tire has to be entirely deflated, and then it can

use in a railway inspection car, this principle is almost ideal, as the inspector can leave the rails and ride wherever his services are required. The machine, as shown, will make easily 25 miles an hour on the road, and fully 35 miles an hour on a railroad, carrying fuel for about 100 miles.

Patents have been applied for on this new double rim construction.

Kensington Creditors to Present Claims.

Creditors of the Kensington Automobile Manufacturing Company, of Buffalo, N. Y., are being notified to present their claims, with vouchers attached, to Assignee Bert Schelling, at his office, No. 2 German Insurance Company Building, No. 447 Main street, Buffalo, on or before May 10. The notice is given in pursuance of an order issued by County Judge Emery of Erie County.

The salesroom section will have a frontage of 80 feet on Main street and a depth of 100 feet. The garage, which will be behind the salesroom, will be of the same dimensions. The salesroom building will be at least three stories high, while the garage will be one story high.

It is planned to adapt the building perfectly to the needs of an automobile showroom. The first floor front will be mostly of glass with terra cotta trimmings. The building will be of slow burning construction and will have every convenience for an automobile business of the size of that of the Pierce concern.

Ground will be broken for the main building about May 1, and it is expected that the building will be finished by fall. The garage being lower will require less time and it is expected that it will be ready for use in two or three months.

Chauffeurs Complete Organization.

The temporary organization of San Francisco chauffeurs, which was noticed in the Motor World a few weeks ago, has been made permanent under the name of the 'Chauffeurs' Association of California, No. 1. It was founded "for the purpose of protection and benefit and to promote a feeling of good fellowship among the various men employed in driving motor cars."

At the present time the new organization

has more than fifty members. Officers have been elected, bylaws arranged and a new scale of wages fixed. The chauffeurs are now divided into three classes, with a sliding scale of wages. Each man must pass an examination and must be skilled in running a certain make of machine before securing a position. The newly elected officers of the association are as follows:

President, S. Hewson; vice-president, A. R. Newcomb; secretary, T. J. Swentzel; treas-

urer, J. P. Jarvis; conductor, Louis Lucky; sergeant-at-arms, C. M. Anderson.

The chauffeurs have mutually agreed not to go over the speed limit in Golden Gate Park at night time.

Glidden's Preliminary Trip.

Charles J. Glidden sails for London April 26 to perfect some arrangements for his proposed automobile tour of the world. He will return about the middle of June to complete the details for the New England tour to St. Louis.

NORTHERN AUTOMOBILES



Northern Runabout
6½ Horse Power, Price \$750

Handsome outline and finish that appeals to the customer; convenient box under front dash for storm apron, tools, etc. All working parts enclosed and dust proof; most silent operator extant.

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THE CHAINLESS

WOLVERINE.

A Live Proposition for Live Agents.

A few of its Characteristics:

Bevel gear drive with sliding gear transmission, 3 speeds ahead and reverse.
Speed range from 6 to 35 miles per hour.
Long wheel base.
Large high back tonneau.
Finest leather upholstery.
Space under tonneau floor to carry extra tire, rain covers, etc.
Brakes positive and operated by foot.
Wheels wooden of heavy artillery pattern and fitted with 30 x 3 1-2-in. Diamond Tires.
Ignition by jump spark automatically controlled.
Sight feed oiling device on dash, 500 miles on one oiling.
Beautiful in appearance and handsomely finished.

PRICE, \$1750.

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MOTORING'S MEDICAL ASPECT

For the "Run Down" Man it has no Equal
—Cures Insomnia, Too.

Motoring has received the unstinted approval of many medicos, who have pronounced the automobile a panacea for many of the ills which afflict persons of sedentary habits. The latest speaker on the subject is a Scotchman, Professor Hugh Galt. He recently addressed the members of the western section of the Scottish Automobile Club on "The Medical Aspect of Motoring."

Life in a city, it was pointed out, resulted in the absorbing into the system of various poisons, which made themselves felt in the form of malaise, biliousness and other similar troubles usually ascribed by the medical profession and laymen to a man being in the condition known as "run down." For this condition a motor car run was of great value. It stimulated the kidneys, the liver, and, to a less extent, the bowels, and the increased circulation had the effect of removing from the system the poisons thus released. Motoring, according to the professor, had the effect of increasing the circulation of the blood, the heart's action being accelerated with a corresponding oxygenization of the blood usually from air of the purest kind.

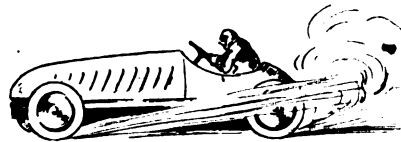
Of course, there must be some regard to the constitution and health of the person riding in a motor car. These very qualities inspired in any one of sound health might be inadvisable, and even harmful, to a person of impaired heart or delicate health, unless taken with a due regard to the condition of the body. But ordinarily to a person of fairly good health the value of automobilism is apparent. After a week's hard work of a sedentary character there is nothing so reinvigorating as a brisk motor trip of many miles, the change of scene and the contact with the fresh air having a most beneficial effect on the whole system. Just as motor ambulances will soon be recognized as part of the equipment of every ambulance station, so will motor cars be considered a necessary feature of every convalescent home. Patients in such institutions will find their recovery hastened by automobile rides, under, of course, medical advice.

During the discussion at the Scottish club Dr. Robb raised the question as to the effect of motoring on insomnia, and Professor Galt extolled motoring as an absolutely unfailing specific for that distressing complaint. The brain cells were invigorated by the increased circulation; the run through the pure air had the effect of soothing the irritated nerve centres, and the insomnia patient who had gone through this experience in the forenoon, and proposed seeing the sights of the town in the afternoon, usually saw the sights of the town in his dreams while sound asleep in the smoking room of the hotel. The advantages of this or any other really interesting

open air hobby; the ability to get almost immediately change of air and change of scene; the evils of monotony on both mind and body, but especially the mind, and the mental training in the direction of resource and self-reliance were all referred to and commented on in a way that should cause many people to regard the motor car from a new aspect.

But there are points in connection with this view of the motor car which should not be ignored, viz., the effect of motoring on the eyes, and the want of exercise associated with the pleasures of driving an automobile. Of course, in the early days of the motor car the vagaries of the vehicles then in use provided plenty of opportunity for enforced exercise in the form of mounting and remounting to attend to matters that would

Evolution.



go wrong, and to difficulties that would arise without any apparent cause. But those times are past, and punctures provide the main excitement of that kind with which the motorist is entertained while riding. And after a drive of many miles the limbs become stiff and cramped. Under those circumstances Sir Henry Thompson recommends that "opportunities should be found once or twice during a long journey of, say, seventy or eighty miles, to take a short but smart walk for a few minutes, to keep the muscles in order, and make the blood circulate through them." Care, too, should be taken to secure protection against wind and wet by the adoption of the special garments to which so many leading tailors have given close study of recent years. As to the eyes, the use of goggles becomes absolutely necessary when any great speed is attained on the road, especially when roads are dusty and winds are lusty.

NOVEL LOGGING AUTOMOBILE

Maine Man has a Vehicle Which Does the Work
of Thirty-two Horses.

Several years ago a concern engaged in the logging business in Maine had plans prepared for the construction of a motor vehicle to be used in hauling logs to market. Nothing came of it, however, the project being abandoned, seemingly, through inability to produce a suitable machine.

Word comes now, however, from Lincoln, Me., that a machine, or rather two of them, of the sort have been built and tried with complete success. They were invented by John McGregor, a Scotchman, who has made a fortune in spool bars, owning several mills, from which he annually exports millions of spools.

Most of his spool bars, which are of birch and very heavy, have to be hauled from Burlington to Lincoln, a distance of fifteen miles, the bill for teams being very high. McGregor, with his two automobiles, can haul the bars at about one-half the former cost, and will later have two more built.

The new log haulers are odd in appearance. In front they rest upon stout sleds, which are used for steering purposes. The rear rests upon two sets of logs, such as horses tread upon in a threshing machine, one on each side of the log hauler. These logs are about two feet in length, and furnish the necessary traction for moving the machine. Power to move the logs is furnished by four engines of the marine type, capable of generating collectively 90 horsepower.

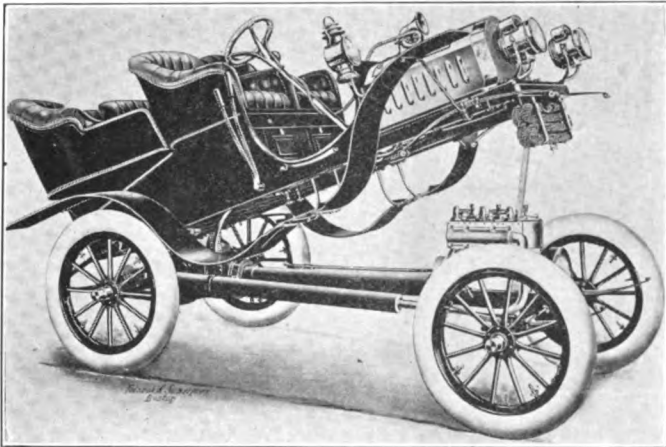
A horse is required between the shafts of the sled in front to steer the machine, but does no hauling. Three men are required to operate it, and each machine can haul 20,000 feet of spool bars in a day, the work of thirty-two horses. The load hauled by the machine is placed upon a strong sled, 21 feet in length and 8 feet wide. Coal is used for fuel, and the cost of operating the automobiles is about \$40 a day.

Most of the road over which the bars are hauled is through the woods, and the conditions are just the same as in the wilderness where spruce logs are now hauled with great difficulty by horses. It is proposed to make further experiments with the log hauling machines, and if practicable many will be put into use in logging operations.

Must not Fear Autos.

An English court has handed down a decision that a horse sold under the warrant that it is "quiet to ride and drive" is not quiet within the meaning of such a warranty if he exhibits symptoms of terror at the approach of an automobile.

Altobna, Pa., is contemplating the purchase of an automobile ambulance. A committee of five has been appointed to look into the matter and ascertain the cost.



PHELPS

HAVE YOU SEEN IT

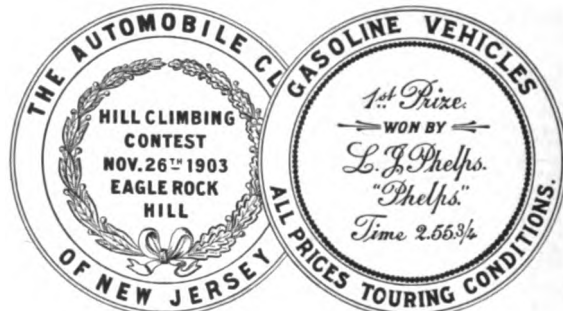
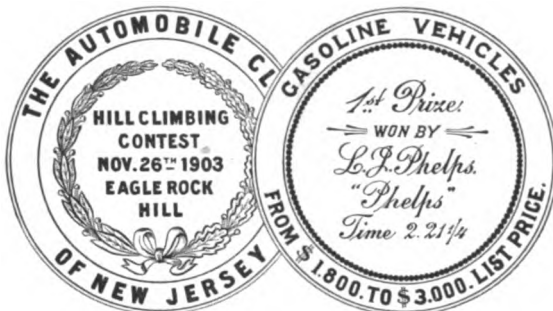
Chute the Hills?

POWERFUL AS A LOCOMOTIVE.

SWIFT AS THE WIND.

QUIET AS A SEWING MACHINE.

*If you buy before seeing the PHELPS
you will regret it all your life.*



PHELPS MOTOR VEHICLE COMPANY, Stoneham, Mass.

BOSTON—177 Berkeley Street.

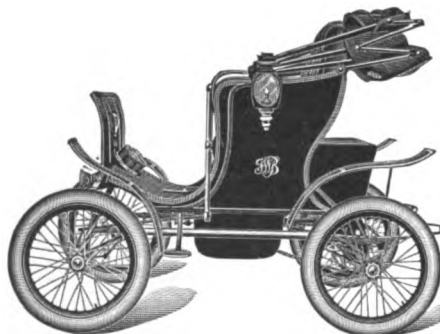
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PHILADELPHIA—240 North Broad Street.

THE BAKER ELECTRIC

THE SUCCESS OF THE BAKER IS QUALITY.

THE
BEST TO
RIDE.



THE
CHEAPEST
TO KEEP.

FIVE FORCIBLE FACTS: THE BAKER

IS THE BEST MADE.

THE BEST FINISHED.

SIMPLEST TO HANDLE.

THE MOST DURABLE.

THE MOST EFFICIENT.

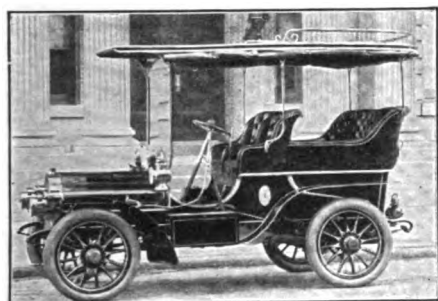
Consequently the Baker is the best to sell.

Send for particulars.

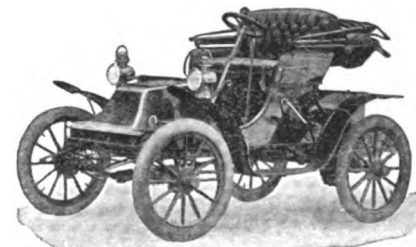
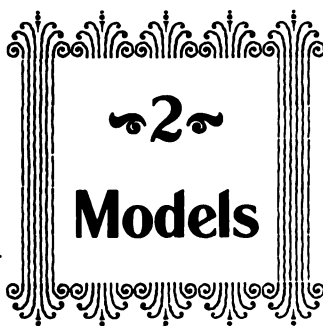
THE BAKER MOTOR VEHICLE CO., - Cleveland, Ohio.

Brooklyn Automobile Co.

HAYNES-APPERSON



\$2550, complete with top and full equipment.
\$2450, without top, f. o. b. Factory.
 The handsomest car on the **AMERICAN MARKET**
 and built for American Roads.



\$1450, complete with top and full equipment.
 14 actual brake horse power.
 More power than many of the so-called tonneau cars.
 An Ideal Light 2-Passenger Touring Car.
 The rougher the conditions and the steeper the hills, the better.

THE QUESTION OF DELIVERY.

Last year we were able to secure only a few over 50% of the Haynes-Apperson cars we contracted for.

We returned deposits on **OVER 23%** of the orders that we took, owing to our inability to give **ANY** delivery.

This year we have tried to guard against such a condition, and have in this respect:—i. e., we **CAN** give delivery when we **PROMISE** and will guarantee to do so under forfeiture, if desired.

We have some good delivery dates open now.

Further, remember practically all Haynes-Apperson cars have been sold before they were built.

They are not an experiment; they have stood the test of time.

Ten years of persistent study in manufacturing this type of car.

Brooklyn Automobile Company,

EXCLUSIVE AGENTS

For Connecticut, New York State (except Buffalo), New Jersey, Eastern Pennsylvania and Delaware.

General Distributing Agents for the East.

NEW YORK OFFICE AND SALESROOM;
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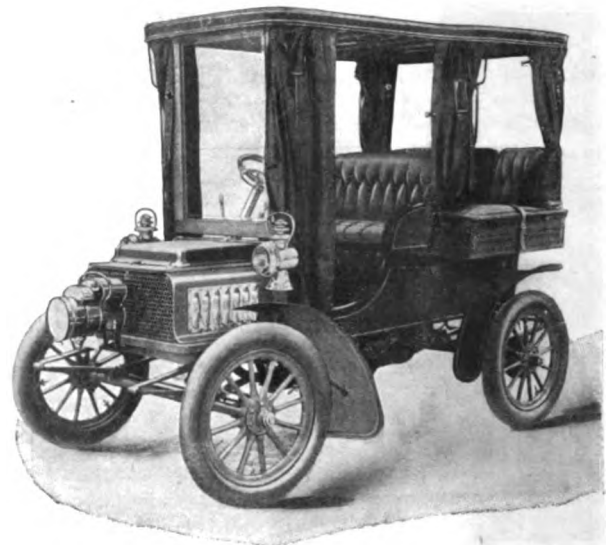
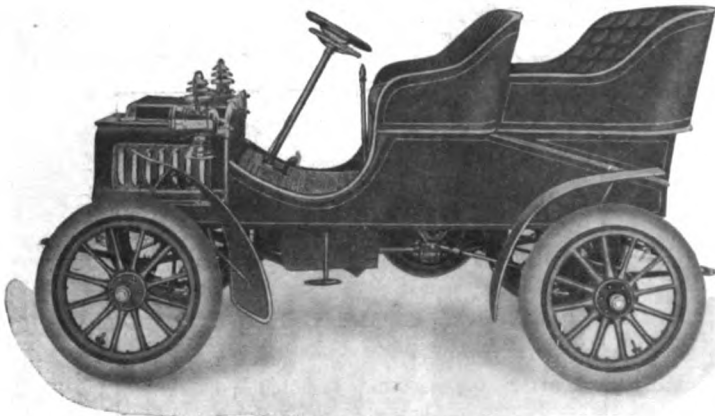
We wish to introduce these cars this year in our territory through a few responsible agents. They need but to be shown to be appreciated. Early applications considered.

THE REASONABLE FIRST COST

OF A

Rambler

is scarcely less important or less impressive than the cost of maintenance. Simplicity and durability are Rambler characteristics.



\$650—\$1350

You may pay more, but you can't get your money's worth.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York, U. S. A., Thursday, April 28, 1904.

No. 5

PENNINGTON DOWN AGAIN

**Versatile Bankrupt's Latest Bubble Bursts, and
Cleveland Creditors Apply for a Receiver.**

E. J. Pennington, the meteoric plunger, who has "dabbled" in everything of a boom nature from airships to automobiles, and whose checkered career has interested and concerned the people and courts of two continents, has once more assumed a familiar role—that of facing bankruptcy.

His most recent venture, the Cleveland Motor Company, of which he posed as general manager, has gone the way of all his previous enterprises. Last week the McIntosh Hardware Company, the Plaindealer Publishing Company and the Leader Publishing Company, all of Cleveland joined in a petition for the appointment of a receiver for the concern, which is the first move toward forcing it into bankruptcy.

The petitioners allege that Pennington has transferred the entire assets to W. J. Morgan, a Cleveland stockholder of the Cleveland Motor Company, the assets consisting of tools, patents and material in various stages of completion; no finished product ever has been placed on the market. The petitioners intimate the concern was merely a stock jobbing enterprise.

The marvelous part of Pennington's career is the seeming ease with which he is able to obtain support of various schemes, despite his well known reputation. Nothing seems to faze him. Although some ten years ago he floated a big bubble in Cleveland and less than two years ago blew another one in Racine, Wis., decamping before the inevitable crash, without, it is alleged, paying even his hotel bill, he was yet able to return to Cleveland and again obtain support and credit and from some of the very people who had suffered because of his previous practices.

His most conspicuous "play" while working the Cleveland Motor Company was the widely heralded "construction" of an alleged 300 horsepower automobile which was to have contained sleeping apartments and all other appointments of a first class real-

dence. Its "sale" for \$35,000 to a millionaire was duly chronicled in almost every paper in the world.

Take Over Bankrupt Company.

The American Motor Carriage Co., of Cleveland, O., which has been in the hands of a receiver for some months, has been sold to a syndicate of local people, organized by C. W. De Mooy, Charles T. Laughlin and others. The new owners have organized a new corporation, known as the American Automobile Co., with a capital of \$50,000, as noted in last week's Motor World, and will continue the manufacture of automobiles. Mr. De Mooy has been connected with the business before, and Mr. Laughlin was formerly connected with the Prudential Trust Co. as assistant secretary and treasurer and later as assistant treasurer.

Bretz Goes with Corbin.

J. S. Bretz has been appointed general manager of the Corbin Motor Vehicle Co., New Britain, Conn., and will enter upon his duties at once. Mr. Bretz has had a wide and extensive experience in the manufacturing field, and will bring to his new position a knowledge that will be extremely useful to the Corbin company.

The latter will make a specialty of the manufacture of heavy trucks; one of these is now running on the New Britain streets, together with one of the company's four cylinder touring cars.

Rice to Manage Waverley Plant.

H. H. Rice, for the last seven years the able manager of the Pope Mfg. Co.'s Providence branch, has been promoted to the office of manager of the Pope Waverley factory at Indianapolis, Ind., and will assume the duties at once. The merited elevation of Mr. Rice carries with it a shift of Pope managers, W. J. Foss, of Washington, D. C., assuming the management of the Providence branch, and C. R. Hough, of the Waverley department at Indianapolis, taking Mr. Foss's place at Washington.

Weston Creditors to Get Dividend.

C. L. Stone, referee in bankruptcy of the I. A. Weston Company, Syracuse, N. Y., reports a balance on hand of \$6,724.13, "subject to the expenses of administration." Out of the sum the final dividend will be declared on May 22 next.

GET WHAT THEY WANTED

**All the Restaurant and Half the First Gallery for
Accessory Men at Next Show.**

It would seem that The Motor and Accessory Manufacturers have won their point. They will get a better allotment of space at the forthcoming shows, and henceforth all will be peaceful between this new organization and the National Association of Automobile Manufacturers.

The story of how President Post of The Motor and Accessory Manufacturers went before the executive committee of the N. A. A. M. and made a speech, and told what the body wanted, was told by the Motor World exclusively on April 14. In that address Mr. Post said:

"If it should appear to your committee that parts and accessories do not form an attractive part of a show—that a show limited to automobiles only would serve the interests of the industry as well and attract equal patronage, or, if available space is not sufficient to assure all manufacturers a location and area commensurate with the expense, I am sure that all our members will cheerfully leave you the field—or possibly hold a parts and accessory show near by and on contemporaneous dates.

"We can never again agree to exhibit in an inaccessible gallery with narrow aisles and of very limited capacity, notwithstanding its close proximity to heaven.

"If you want us, if you believe that our branch of the industry will prove of assistance to you, then I am sure you will accord us the recognition to which our position in the trade entitles us."

Evidently the N. A. A. M. concluded that it does want the accessory men. An agreement has been reached whereby, at the next show in Madison Square Garden, the parts and accessory makers, those who are members of the new organization anyhow, will be given spaces satisfactory to them. They will be allowed half of the gallery over the arena boxes, and ail of the restaurant. Hitherto, the restaurant has been given over to exhibitors of foreign cars.

It is probable that The Motor and Accessory Manufacturers will have offices in New-York at an early date.

WANT "E. E. SMITH"

San Francisco Investors Duped by Clever Swindler who Dabbles in Fictitious Automobiles.

San Francisco police officials are searching diligently for a clever swindler who passed by the name of Everett E. Smith, of "E. E. Smith & Co., automobile agents," who had an office in the Crossley Building, New Montgomery and Mission streets. There is a warrant out for his arrest on a charge of obtaining money by false pretences, the complaining witness being Charles M. Eckland, No. 1,038 Peralta street, Oakland.

Smith opened offices in the Crossley Building on March 12, and negotiated for the lease of an automobile stable at Golden Gate and Van Ness avenues. He advertised for a partner, and on March 23 Eckland paid him \$1,000 cash for a share in the business. Smith represented to him that he was agent for Benz & Co., automobile manufacturers, Mannheim, Germany, and said he had eight carloads of machines from that firm in bond in Chicago.

Eckland was sent to Chicago to obtain money to release the machines from bond, and was furnished with a letter of introduction to an alleged friend of Smith in that city, who, it was claimed, would provide the money and also pay for Eckland's transportation back, Eckland having paid his own fare to Chicago. Eckland called at the address given in Chicago, but no such person was known there. Eckland made inquiry, and ascertained that nothing was known at the custom house of the existence of the eight carloads of machines. He then consulted a private detective agency, and was told that he had run up against one of the cleverest crooks in the country. When he returned home he discovered that Smith had flown.

Another victim of Smith is Alexander Westrup, of Kenwood, Sonoma County. He also answered the advertisement for a partner, and on March 24 paid Smith \$1,500 cash and gave him a note for \$1,500 more. He was told by Smith that a customer in Pasadena wanted to buy an automobile, but as there was not one in stock that would be suitable he would have to go to Salt Lake City, where Smith said he had a machine of his own. Westrup was to get the machine and bring it to the city. He got a letter of introduction to the man in Salt Lake, who, Smith said, had the machine, but when he got there no such man was known. Westrup also paid his own transportation. When he returned to San Francisco Smith had disappeared.

E. V. Business Is Booming.

The factory of the Electric Vehicle Company, at Hartford, is running twenty-four hours daily. Orders for Columbia cars received since February 15 aggregate the sum total of the company's business all last year.

The Week's Incorporations.

New London, Conn.—New London Motor Co. Officers: President, Fred S. English; secretary and treasurer, John C. Geary.

Brooklyn, N. Y.—Outing Automobile Co., with \$30,000 capital. Directors—F. L. Smith, Albert Bautre and A. L. Brougham, Brooklyn.

Chicago, Ill.—Chicago Automobile Trade Association, for social purposes. Incorporators: Daniel V. Gallery, Carl A. Vogel, Judson F. Going.

Chicago, Ill.—Auto-Car Equipment Company, with \$6,000 capital, to manufacture engines. Incorporators: R. W. Judson, Ione J. Tobin, A. W. Tobin.

New York, N. Y.—Touring Car Co., with \$10,000 capital; to deal in automobiles, etc. Incorporators—Charles K. Starr, Harry Boes and George W. Olvany.

Buffalo, N. Y.—Buyers and Manufacturers Automobile Company, with \$300,000 capital. Directors: Carl Thorden, W. H. Van Deusen, C. V. Roty, Buffalo.

Jersey City, N. J.—The Auto-coil Company, with \$100,000 capital, to deal in electrical supplies. Incorporators: Charles T. Boyd, John J. Regan and John J. Baumann.

Newark, N. J.—Breege Motor Mfg. Co., with \$10,000 capital, of which \$1,000 is paid in; to make automobile engines. Incorporators—George A. Breege, Hugo Stummel and Joseph V. Weber.

San Francisco Concern Branches Out.

The Pioneer Automobile Co., of San Francisco, which recently increased its capitalization from \$100,000 to \$200,000, has purchased the land on which their new building is situated, at a valuation of \$65,000.

The company has also purchased the business of the Oldsmobile company of Southern California, which embraces Los Angeles and all surrounding territory. The business in Southern California will be in charge of John F. McLain, the present manager of the company at that point, and Leon T. Shettler, former manager of the Oldsmobile company of Los Angeles, will be employed as sales manager, he having purchased a substantial interest in the Pioneer Automobile Co. Under this new arrangement the company will have the Pacific Coast agency for the Winton touring car, Oldsmobile, Locomobile, Stevens-Duryea and a French car, and for the Vehicle Equipment Co.'s electric trucks.

Another big Month for Exports.

Exports of automobiles and parts continue to make a good showing. March was one of the largest months on record, the values being \$164,406, as against \$93,618 for the corresponding month of last year. For the nine months of the fiscal year the values are nearly double those of 1903, the figures being \$1,305,777 and \$759,841, respectively.

The F. B. Stearns Co. is bringing out a four cylinder vertical motor machine of 30-40 horsepower.

UNFINISHED CARS EXEMPT

Corbin Car, with Unpainted Body Tested on Road Without State License, Wins Court Case.

An interesting point of law, in connection with the testing of cars by manufacturers on the highway in Connecticut has been brought out by the Corbin Motor Vehicle Company, of New Britain, Conn.

J. H. Jones, an engineer employed by the Corbin Company, was arrested in New Haven last week, charged with running a car without a number on it. The car was in an unfinished condition, the motor being uncovered and the tonneau not having been varnished. On the back was chalked the name "Corbin."

Mr. Jones said that the machine was the property of the Corbin Motor Vehicle Company, of New Britain, Conn., and was being tested out. He claimed to be fully within the law, and quoted Section 7 of the revised statutes in support of his claim. Section 7 reads as follows: "The provisions of sections 1, 2 and 5 of this act shall not apply to such automobiles or motor vehicles as are owned by manufacturers or dealers in such vehicles and are not employed in the private business or for the private use of such manufacturers or dealers."

Later, when the case came up in the city court Mr. Jones appeared, accompanied by Paul H. Wilson, assistant treasurer of the Corbin Company, and Attorney J. H. Kirkham, of New Britain. Mr. Wilson stated that his company was prepared to make a test case of the matter, and would carry it to the highest courts. He also stated that his company had just begun the manufacture of automobiles, and is allied with the Russell & Erwin Manufacturing Company and the Corbin Screw Corporation, both of New Britain. It was shown in court that the Pope Manufacturing Company and the Electric Vehicle Company, of Hartford, ran machines for the purpose of testing without displaying a number. After reviewing the evidence Judge Dow dismissed the complaint, stating that in his opinion the law had not been violated.

Big Tires for Snell Trucks.

The B. F. Goodrich Co., Akron, O., have received an order from the Snell Motor Truck Co., of Toledo, O., for a set of Goodrich solid side wire tires, 38x8 inches. These tires are to be especially made for heavy truck purposes, and will be the largest pair of solid tires ever made. The truck on which they are to be fitted weighs ten tons without load.

Ford Increases Cylinder Dimensions.

The Ford Motor Co. are increasing the dimensions of their motor from 4x4 to 4¼x4¼, and substituting steel for the bronze gears formerly used.

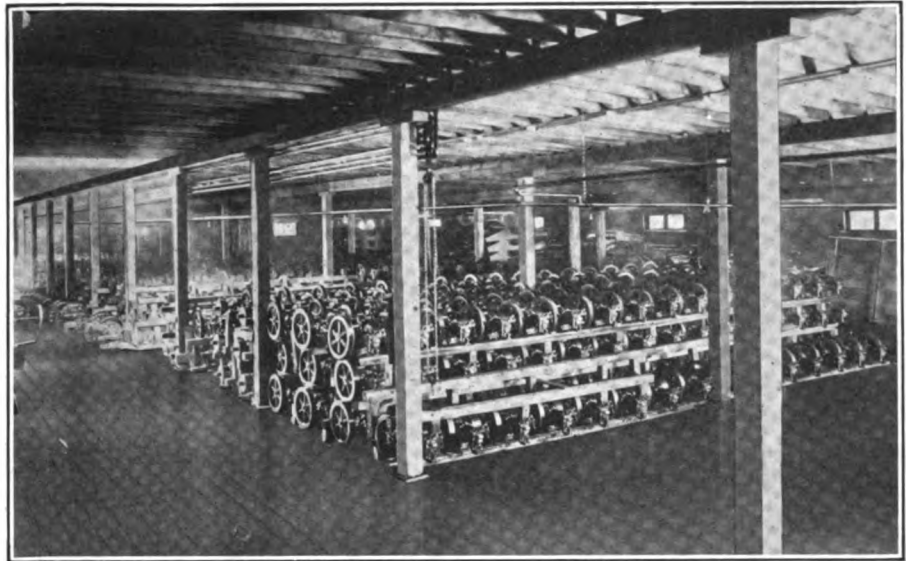
THE CADILLAC FIRE

Peculiar Cause of Origin, and Energy of the Sufferers—Some Lessons Learned.

Detroit, April 21.—The story of the Cadillac fire is fuller of human interest, likewise instruction, than any of the published accounts have made appear.

In the first place, the fire was not caused by either ignition or explosion of gasoline, but was caused by a riveting machine burning crude oil. The origin of the fire was somewhat peculiar. This riveter resembles in appearance a small brazing machine. It holds eight gallons of crude oil, and is under twenty pounds air pressure, which throws the oil through a narrow aperture, where it is ignited by torch. The rivets are placed over the flame, heated, and then set in the frames. On the morning of the fire one of these machines was not fitted with the regular valve, but had an arrangement operated by a small lever, which regulated the flow of oil. For greater convenience the man operating it attached a stick of wood to the lever, thus lengthening his purchase on the same. He turned this lever to the required position and stepped back about four feet, torch in hand, and ignited the oil. Just as he did so another workman ran between him and the machine, brushing against the improvised, elongated lever, throwing it wide open. Instantly the full flow of oil was turned on, and, igniting from the torch, immediately started a blaze. The burning oil was blown downward and on the floor, and in the twinkling of an eye a fierce flame was started, which, despite all efforts, soon got beyond control. The employees showed great coolness and courage, improvising small hose, and, led by one of the men who up to a month previous had been connected with the Fire Department, they did all that it was possible to do, even holding on to the hose until it was actually burned out of their hands. The effort was in vain, however, for the fire, once started, could not be checked, and the result every one knows.

The plant was provided with the latest and most modern fire extinguishing apparatus, which, however, was of little avail against the inflammatory nature of the contents of the buildings. The action, or rather lack of action, of the Fire Department cannot be too severely criticised—in fact, it seems inconceivable that such crass stupidity and blundering and unpreparedness could exist in a city the size of Detroit. The Cadillac factory almost touches the walls of an engine house, and is in the heart of a district of large manufacturing plants. First, second and third alarms were immediately turned in, but it was actually fully twenty minutes before the engines got to work. The delay was partly caused by the fire engines using hard coal. When they did start to work it was found that the water pressure was insufficient to raise a stream to the second story, and so the spectacle was pre-

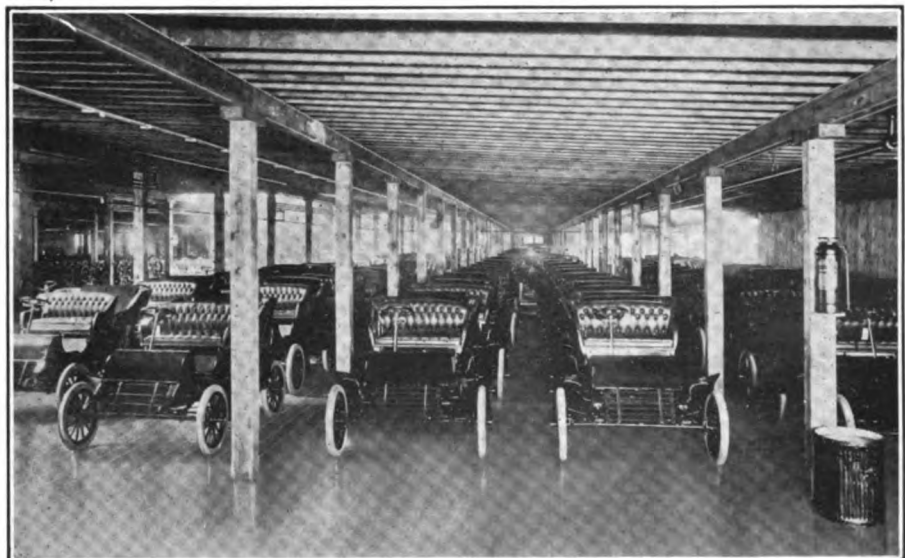


CORNER OF CADILLAC WAREHOUSE, SHOWING 2,000 MOTORS READY FOR ASSEMBLING.

sented of a factory containing \$1,000,000 worth of material left to be consumed. However, after the fire had been raging for over an hour the waterworks powerhouse was telephoned to and added pressure secured, which enabled the streams to reach somewhere within striking distance. Though there were two Siamese boxes, one on either end of the building, through which additional water could be forced into the building, these were not even broken into. Worse yet, when it was seen that the new buildings were beyond saving, every effort was centred on the salvation of the toolroom, the heart of the whole business. A line of hose was run to this point, but at the orders of the Chief of the Fire Department was withdrawn, and it was only after the most strenuous protest of the officers of the Cadillac Automobile Co. that this line of hose was replaced. Even then the worthy Chief of the fire fighters had to walk the whole length of the building and back again before his slow working mind could decide that the line of

hose would be replaced. It may be here added that an investigation is in progress, which, it is to be hoped, will make a recurrence of such blunders impossible.

The lesson was costly, however, involving the total destruction of \$450,000 worth of property on which there was an insurance of \$300,000, and a loss of profits the amount of which can only be conjectured. A somewhat pathetic sight was seen this morning, when, in company with Manager Metzger, I mounted a ladder and climbed in through the window of the second story of what was a new building, which had been practically completed but not accepted, by the company. This building was intended to be a finishing room. When it was seen that the fire would in all probability destroy the big building in which it was started, the employees, fighting their way through the smoke and flames, managed to run into this new building, through which a door had been cut, fifty-six fully completed machines, believing that in this building they would be, beyond all doubt.



ANOTHER VIEW OF WAREHOUSE AFTER THE FIRE. CARS READY FOR SHIPMENT.

(Continued on page 176)



Light Touring Car, \$1,450

The 1904 Haynes

1904
Tonneau**TWO MODELS**1904 Light
Touring Car

Tonneau, \$2,550, with top and front glass, two Solar No 1 gas headlights two Dietz Regal oil lights, tail light, horn with tube, and full equipment. \$2,450 without top and front glass.

Light Touring Car, \$1,450, having much the same outward appearance as our famous Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

We originated the make and break spark for automobile gas engines, now used by all the best makers in the world, and brought it to its simplest and most effective form, which has never been equaled. Get the catalogue.

Most Haynes-Apperson cars have practically been sold before they were built. Get your order in early.

THE HAYNES-APPERSON COMPANY, Kokomo, Indiana, U. S. A.

THE OLDEST BUILDERS OF MOTOR CARS IN AMERICA

Members of the Association of Licensed Automobile
Manufacturers

Branch Store: Chicago, 1430 Michigan Ave.,
See Our Exhibit at St. Louis Fair

New York, BROOKLYN AUTOMOBILE CO., 66 W. 43d St.
Los Angeles, J. A. ROSESTEEL, 649 Broadway
Toledo, TOLEDO MOTOR CAR CO.

REPRESENTATIVES:

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Buffalo, BUFFALO AUTO EXCHANGE, 401 Franklin St.
Boston, C. M. BROWN, 43 Columbus Ave.

WHY DO AGENTS WANT Fisk Detachable Tires?

Can be easily and quickly
repaired on the road.
Air chamber entirely above
the rim.
Impossible to pinch the inner
tube.



Because they are easily sold.
Have a clean record.
Give more mileage.
Give less trouble.
Have satisfied Customers.

GET POSTED ON TIRES.

BRANCHES AND REPAIR DEPOTS:

BOSTON,
SPRINGFIELD,
NEW YORK,
SYRACUSE,

BUFFALO,
DETROIT,
CHICAGO,
SAN FRANCISCO.

PHILADELPHIA,
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TORONTO,
ST. LOUIS,

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MINNEAPOLIS,
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To Facilitate Matters Our Patrons Should
 Address us at P. O. Box 649.

CABLE ADDRESS, "MOTORWORLD," NEW YORK

Entered as second-class matter at the New York, N. Y., Post Office, November, 1900.

NEW YORK, APRIL 28, 1904.

When Business is One-Sided.

To do a satisfactory and profitable retail automobile business when buyers are plentiful and cars can be had for the asking is one thing; but to achieve the same result when there is a shortage of either customers or cars is quite a different task. The latter is a phase of the business which is confronting a number of dealers at the present time. It is scarcely necessary to add that it is not lack of customers that is complained of.

With a few exceptions, every dealer in gasoline cars is behind his orders; and with every recurrence of a spell of fine weather he gets further behind. If the scarcity was not so universal it would come perilously near to spelling disaster with many of them. But where all are crying for deliveries and placating customers as best they can, some sort of a balance is preserved. As new customers come into the market they speedily learn that immediate deliveries are practically out of the question, and that it is only

a matter of whether they shall wait a week or a month.

Within the last ten days a material improvement has taken place. If order books have been swelled by the entry of new customers, until deliveries are as far behind as ever, a number of deliveries have been made and shipments of cars are being received almost daily, even if they are small ones. The factories are striving to distribute widely and wisely, giving each agent a few cars, so as to help him in his present necessity; and they are succeeding remarkably well. The result is apparent everywhere. The dealers are doing business, the cash is coming in, the entire industry is on the move. And while time has been lost, only a small portion of it has been irrevocably so. Had the factories been able to make deliveries in March, the weather has been such as to render it doubtful whether the majority of dealers would have delivered many more than they have already done. Even yet the riding season has scarcely begun, and it will not be until the merry month of May is entered upon that it can rightly be considered in full swing.

A Matter of Capacity.

It is very apparent that convertibility is to play a very considerable part in the future development of the automobile industry. Whether wisely or not, a large proportion of users hold the belief that automobiles should have a varying capacity, expanding or contracting as the occasion varies.

Until the present season began the two passenger type of car had a pronounced lead. It was the cheapest vehicle, in the first place, and it was, in this country at least, the type upon which the greatest amount of attention has been bestowed, and which, consequently, had been brought nearer to a state of perfection than any other. But a great change has taken place. The average buyer, whose purchase is limited to one car, is possessed of a very strong desire to obtain a car that will carry more than two persons. There are times, of course, when that number will not be exceeded; but they are largely outnumbered by others when a party of four or even more is arranged for and loaded into the car. Indeed, so much emphasis is now laid on the expansive qualities of the car that little thought is given to the matter of contraction—that is, the major part of attention is centred upon a carrying capacity of four or more, and it makes little difference, comparatively, whether the capacity can be reduced when only two passengers are to be carried. The disadvantage of too

great capacity will become apparent as the season advances and the car enters into extensive use. It will then be seen that a car which carries four or more comfortably will behave much less satisfactorily when only two go to make up its complement.

If this was the only drawback, however, the matter would not be so serious as it is. But the mistake that is most likely to be made is to force the trade to put out runabouts as touring cars, i. e., to take what was formerly a runabout, increase its power slightly, add a trifle to the strength of its running gear, fit it with a tonneau body and dub it a touring car. Even then, if the matter stopped there no great harm would be done. There are plenty of cars of this sort on the market which are entitled to the name of light touring cars, and which will give entire satisfaction if too much is not asked of them. But the same pressure that has been brought to bear on the runabout, with the result known, continues, users not being satisfied until they get still closer to the big, high priced, full powered and luxuriously appointed touring cars of the de luxe type; yet they must perforce stop far short of this by reason of the fact that they place an arbitrary limit on the price.

Nevertheless, the craze for touring cars must run its course. No one can deny its existence, and to attempt to stay the tide is to essay the role of Canute, with just as much prospect of success as fell to the Saxon king. The user must learn by experience the fallacy of his method of reasoning, and if he is not led to expect too much, he will be amenable to reason in the end.

Work for the Authorities.

It is just such performances as that made by George Wilkens, of Philadelphia, last Sunday, which was heralded across the country as a new "cross-State record," that bring automobiles and their owners into general disrepute.

Wilkens drove a car from Philadelphia to Atlantic City, a distance of sixty-two miles, in 1 hour and 18 minutes.

There is nothing very remarkable about the performance except its audacity and disregard of law and the safety of others and of the repute of automobiling. As a record the feat is valueless.

It would be an excellent thing if the New-Jersey authorities would get Mr. Wilkins and his timers to make affidavits of the performance. It would then be of value as a police record and a source of increased revenue to the coffers of several counties.

Tendencies in Wheel Building.

Some little stretch of the imagination is required to recall that only a couple of years ago wire wheels were sufficiently in favor to divide patronage with the artillery type. The latter was just beginning to strike its stride—to enter upon that career of popularity which was soon to bring it into almost universal use. In some quarters there was a disposition to look upon it as a fad, the ephemeral character of which would become evident in a short time. Even where this view of it was taken, however, the necessity for bowing to and supplying the public demand was recognized.

At the present time the wire wheel is almost non-existent, and only the presence of the tubular wheels prevents the artillery type from having the field entirely to itself. In view of this, it is idle to contend that the artillery wheel is either a fad or a fashion. Its solid merits are indubitable, and to them, rather than to any fortuitous circumstances, is due its success.

Yet no one who has had extended experience with the wood wheel will assert that it is without disadvantages. The extent and longevity of the wheelwright's trade would give the lie to any such statement. As a matter of fact, no small amount of trouble is experienced, and to give satisfaction an artillery wheel has to be of excellent construction in the first place, and carefully looked after in the second. The least warping or shrinkage must be detected and remedied, for if neglected the wheel will make swift progress in the downward path and in a short time become ruined. With a reasonable amount of care, however, it can be depended upon to give the maximum of service and satisfaction.

Suggestions for the Vanderbilt Race.

No conditions have been decided upon for the road race of three hundred miles for the cup donated by W. K. Vanderbilt, jr. Full assurance has been received that the race can be run on Long Island and that the officials of Queens and Nassau counties are anxious to have it there.

In connection with the race, the Motor World has this suggestion to make: Make it a two-day affair, and let the entries be made according to the new weight classification, the lighter cars of the third and fourth classes racing together the first day, and the heavier, and presumably faster, cars of the first and second classes racing together on the second day.

A race such as this would have many merits. Chief of all, it would be of more industrial and commercial value; it would make the race open to every class of practical road vehicle sold upon the market. In the second place, there would be more entries, keener rivalry, a greater spectacle and better sport than if it was run upon the lines of the Bennett Cup race.

The coupe internationale invites the biggest and most powerful cars of every country. It invites specially constructed racing machines. There is not a great deal of instructive value attached to its result.

A race such as has been proposed would, on the other hand, invite the stock cars, stripped for racing, or in any event machines typical of the product of their maker. This could be insured by the rules. To amplify the suggestion a little:

A prize should be offered for the car that made the best time in each class, possibly a prize for the second best, while the Vanderbilt Cup should be the prize for the car that made the best time, no matter what its class; only, in order to bar freaks, such as are not true road vehicles, it should be stipulated that no car excepting a practical road vehicle, or the chassis of one, was eligible to a prize, and this stipulation could be bound about by definitions of what is required of a practical road vehicle.

The scamper of the lighter vehicles on the first day would be highly entertaining, and every one would attend on the second day to see the big cars shatter records.

The race for the Vanderbilt cup would, of course, be really that of the second day. The contest between the lighter cars of the third and fourth class, held on the first day, would be a sort of preliminary bout to which the appetite, a curtain raiser, so to speak.

Holding the race on two days would have the virtue of reducing the liability of accident by keeping the smaller and slower cars off the road when the big ones were racing. It would be as easy to get the use of a course for two days as for one, and the greater number of entries would help to defray the extra expense.

Class Discriminations Defended.

There are victims of the automobile rabies in Chicago as well as in Podunk and in cobwebby sanctums in New York. An editorial writer on the Chicago Tribune cannot see why an automobilist should object to paying a tax that is not imposed upon users of other vehicles or why he should not volun-

tarily wear a tag to signal him out from others on the highway. He says:

"There is no reason why any person driving an automobile through Chicago streets should not willingly go through the prescribed form of assuring nearly 2,000,000 other people that he knows what he is doing. If he does know and is determined to respect the rights of others he should not be fighting the numbering of his vehicle, the one measure of tracing the law breaking motorist. As for the cost of conforming to the ordinance requiring license, it is \$3 for a first examination of twenty minutes; thereafter \$1 a year for license renewal. As for numbers, all machines virtually are provided with them. To take them off in defiance of the ordinance is to proclaim defiance of police regulations and the rights of the people. The city cannot take the appellate Court decision too quickly to the Supreme Court."

We recommend to this victim of the idea that automobilists are unlike other mortals and not entitled to the same freedom that he read again the decision of the Appellate Court of Illinois and dwell upon that part of it which says:

"To compel one who uses his automobile for his private business and pleasure only to submit to an examination and take out a license is imposing a burden upon one class of citizens in the use of the streets not imposed upon others."

If such class discrimination were just and could be meted out to fit all cases, some editors would wear muzzles and handcuffs to prevent them from launching effusions likely to run amuck on the highways of public sentiment.

In the test of the constitutionality of the Detroit automobile ordinance, which has been instituted by Henry Ford and the Messrs. Dodge, there is a point raised which is new and very interesting, because it applies as well under the law of New York and other States as it does in Detroit.

Among the objections raised to the law in Detroit is that the requirement that every machine sold by a dealer must be registered makes private business public business. This objection holds to the State laws. By simply examining the State registration lists, which are public, any dealer can tell just how many cars a rival has sold, and not only this, but also to whom he sold them. This is a serious objection to the new law of New York.

SOME KNOX WELL LANDED

Three Placed at Clason Point Inn Have Interesting Tests Made with Them.

At a new road house on the shore in Westchester, N. Y., an unusually interesting test of cars for omnibus purposes was completed last week. The place is the Clason Point Inn, at Clason Point, Westchester, twelve miles above the Central Bridge at 155th street and Seventh avenue. It has been opened by an enthusiastic automobilist, Joseph Cowan, and it might with good face have been called "the automobilery," for it will cater especially to this class.

At present the rolling stock of the place consists of three single cylinder 8 horsepower Knox cars, two 5 horsepower De Dion Motorettes, one steam Locomobile, one Mobile, and one 15 horsepower Panhard. There are four automobile sheds at the place, two open and two closed, and a repair shop.

The three Knox cars are new acquisitions purchased to run in stage service between the trolley cars on Westchester avenue and the hotel. This is a distance of exactly 2 miles 275 feet, or 4 miles 550 feet for the round trip. The Knox cars have tonneau bodies with an extra folding seat in front of that for the operator. Their normal carrying capacity is seven passengers.

When the three cars arrived they had each a measured quantity of ten gallons of gasoline put into them and 1½ pints of lubricating oil. They were then put to work running back and forth over the trip until all the fuel had been used up. They were recharged and kept at the work of running back and forth with varying loads, and sometimes empty, for several days, and every fact carefully noted. The testing was under the supervision of David Landau, formerly in the engineering and designing department of the Electric Vehicle Company and the Daimler Manufacturing Company, and also previously designer for the National Battery Company. The road has several winding grades on it, one of them as steep as 11 per cent. The average load of the cars was four passengers, the maximum being nine and the minimum two.

When the cars were first put into service they averaged a round trip of the 2 miles 550 feet in 28 minutes. After three or four trips, when they were warmed up, the average time began to lessen. Landau says it dropped more rapidly and to a greater extent than in any other cars within his experience. The average fell until it reached 22 minutes, and then remained stationary so long as they were kept running by the same man. When a man stopped for dinner and let his car stand and cool, its average time for the trip jumped up again with the first trip, not to the original 28 minutes, but to 24 or 25 minutes. When a change of drivers was made the personal equation was very

plainly shown by a fluctuation in the average time of from one to three minutes.

The test showed that ten gallons of gasoline would run the car for 104.8-110 miles, at an average speed of 11 miles an hour. The cars were run until the last drop of gasoline had been used, and in that time the consumption of lubricant amounted to 1.6 pints. The gasoline was bought at 15 cents a gallon and the lubricant at 35 cents. This Landau figured out to a total cost for the 104.8 miles of .014374 cents a mile.

Last Sunday the three cars carried 264 passengers between the hotel and the trolley road in four hours, at 15 cents a head, which shows a very practical profit. The cars are fitted with Diamond tires, and up to last Monday there had been no repairs of any sort since April 13.

Big Stockholders Visit E. V. Factory.

Harry Payne Whitney, H. H. Vreeland, president of the Metropolitan Street Railway of New York, and Herbert Lloyd, president of the Electric Storage Battery Co., of Philadelphia, were visitors at the plant of the Electric Vehicle Co., at Hartford, on Monday.

Mr. Whitney and Thomas F. Ryan, of New York, are large stockholders in the vehicle company, owning practically the controlling interest. Harry Payne Whitney's interest, of course, has largely increased since the death of his father, William C. Whitney. The Electric Storage Battery Company is also a large stockholder, and the interests of the two companies are in many ways identical.

Mr. Whitney and Mr. Lloyd are in the habit of visiting the plant quite frequently, to see how things are getting along.

President Milton J. Budlong, of the Electric Vehicle Company, was at the station to meet them with a big Columbia car and drove them directly to the Hartford Club, where the four had lunch.

After lunch they went to the factory and President Budlong showed them all over it. All were much interested in the work, and Mr. Whitney particularly expressed himself as greatly pleased with the conditions.

Hart of Hartford has Opening.

On Monday last the Palace Automobile Station of the Messrs. Hart, at No. 122 Trumbull street, Hartford, had a ceremonious opening. Special invitations had been sent out, and a large attendance resulted. They found when they arrived a small sized automobile show. The place was flooded with electric lights, Pope-Waverly cars, Pope-Hartfords, Locomobiles and Autocars were attractively staged, there was an orchestra, flag and floral decorations and a luncheon. The affair was a great success, and it will be continued for one week as a spring opening show. The place is not quite a year old, but is thriving finely.

A salesroom has been opened in East Market Square, Bangor, Me., by W. D. Carrow.

LIVE MICHIGAN CONCERN

Remarkable Development of a Flint Wheel Company—How a Rush Order was Filled.

A concern that has been established but six years, and is now doing in the neighborhood of \$2,000,000 business annually in wheels alone, that manufactures 27 per cent of the total number of wheels of all kinds used in this country, that carries regularly about 14,000,000 spokes on hand, that has ramifications extending to Arkansas and Tennessee, where it controls large timber tracts, that has the reputation of never losing an important customer, and, better still, whose own losses have been practically nothing—such a concern is entitled to a large measure of respect.

And yet the above is about the record of the Imperial Wheel Co., of Flint, Mich., believed to be the largest makers of wheels in the world.

Their two great factories at Flint and at Jackson, Mich., have probably not a counterpart anywhere. Both have been built expressly for the purpose for which they are now employed, and are types of the finest and most modern construction. Their equipment is superb, methods and processes being employed that are found nowhere else, and all tending, of course, to the same end, i. e., that the predominance by the company in its field be not only maintained but further emphasized.

The Imperial Wheel Co.'s carriage wheel business is so large that it was not until the automobile show of 1903 demonstrated the magnitude of the industry that they decided the time was ripe for them to enter that field. Once the decision was made, however, the same energy that had led to such success in the older field was enlisted in the new, and, with the company's now great resources, has already made itself strongly felt. They already supply wheels to the largest makers of automobiles, their daily output being fifty sets, or 200 complete wheels. "The kind of wheels you want and when you want them," is what the Imperial people offer, and they naturally lay stress on their ability to make quick deliveries.

On instance of their energy will give a fair idea of the policy that characterizes everything the company does.

A rush order for 100 sets from a prominent Cleveland manufacturers was received on Saturday morning. At noon the entire shipment was on electric cars, and started from Flint to Detroit on its sixty-nine mile run.

At Detroit the wheels were loaded on the Cleveland boat, reaching the latter place on Sunday morning. A man went with them, secured trucks, and the 100 sets of wheels were delivered at the factory on Monday morning.

That is a sample of the methods that make the Imperial Wheel Co. what it is, and that is bound to make them an important factor in the automobile field.

WINTON



SO simple is the Winton air-governor that with slight practice you come to control your motor almost involuntarily—as easy as breathing. Foot-button pressure gives any speed desired. No levers or pedals to confuse the operator. This exclusive Winton feature is a slight suggestion of other points of superiority at the command of Winton buyers. \$2500 f.o.b. Cleveland. Prompt deliveries. Ask for catalog.

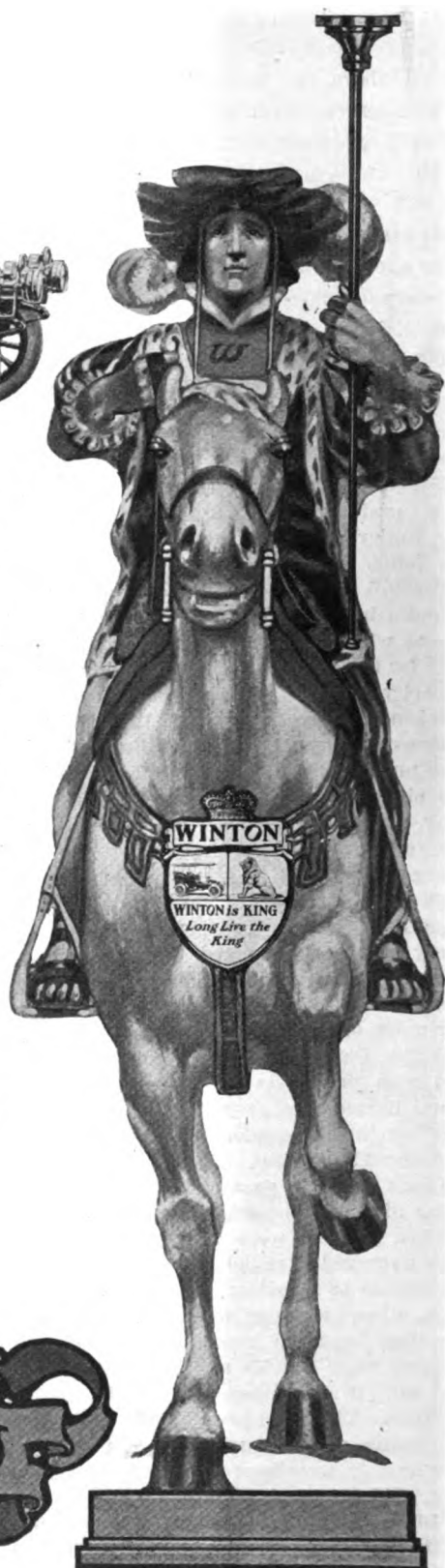
THE WINTON MOTOR CARRIAGE CO.

Member Association Licensed Automobile Manufacturers,

Cleveland, O., U. S. A.

NEW YORK. BOSTON. PHILADELPHIA. CHICAGO.

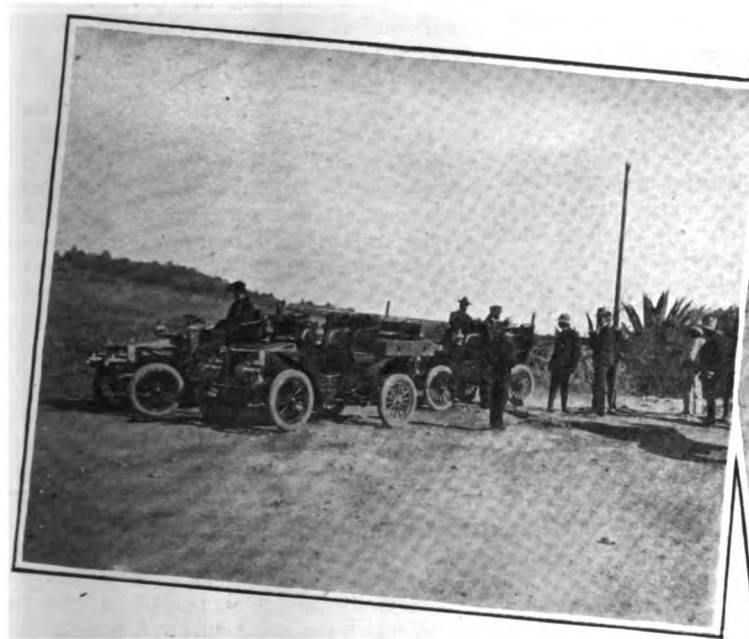
Winton Agencies Everywhere.



TIRE MAINTENANCE TABLE

Cleveland Motorist Calculates Cost and Adduces Some Valuable Figures as a Result.

As bearing on the perennially interesting subject of the cost of tire maintenance, figures compiled by a Cleveland, Ohio, motorist are both valuable and illuminating. The motorist is P. J. Anthony, proprietor of Anthony's Fire and Accident Notification Agency, and the figures cover the three items of tires and repairs, repairs other than tires, and supplies, calculated on two kinds of tires—a set of ordinary pneumatics and a set of Tennant pneumatic puncture proof tires.



WAITING FOR THE STRAGGLERS.

On the former the cost figures out as follows:

Tires and repairs, \$18 per month.

Repairs other than tires, \$12.42½ per month.

Supplies, \$4.12½ per month.

After the car was equipped with the Tennant tires the expenses for the last four months were:

Tire repairs, nothing.

Repairs other than tires, \$4 per month.

Supplies, \$4.12½ per month.

"You will see that I have avoided not only the expense and annoyance of repairing tires, to say nothing of the absolute safety with which I can now travel, but I have reduced the extra expense on my car from \$12.42½ per month to \$4 per month," writes Mr. Anthony to the Tennant Company. "This item I attributed to the easy riding qualities of your tire.

"The car I use makes as many as five run a night to fires, and the emergency is such that we have not time to pick our road, or to dodge any obstacle which might hurt the tire."

Sorry Deposits Were Returned.

There are a number of intending automobilists in Minneapolis, Minn., who have been more or less gently kicking themselves and softly muttering things under their breath for the last week or so. The cause thereof is traceable to the Cadillac fire and their own all too hasty impulsiveness. As the trade know, Minneapolis has practically given itself over bodily to the automobile. The share of popularity the Cadillac has enjoyed can best be appreciated by the fact that the Pence Automobile Co., the local agents, had actually taken deposits on eighty machines.

When the news of the fire was flashed to the Flour City, the scene at the Pence Co. store resembled a run on a bank, depositors rushing there to demand a return of their money. They got it as fast as it could be

WHITE CARS IN MEXICO

Five Carloads of Tourists Visit an Inaccessible Convent Deep in the Forest.

Webb Jay, of the White Sewing Machine Co., has just returned from Mexico City, Mex., where he went in the interest of his company. While there he was commander in chief of a party filling five White cars which journeyed to De Sierto, an abandoned convent located on top of the mountains and deep in the recesses of the forest, five miles from any travelled highway. No attempt had ever been made to reach the convent with wheeled vehicles; the "road" leading to it is merely a burro trail, and of such a rough



CLIMBING A 23 PER CENT GRADE.

passed out, over \$4,000 being returned in about three hours. Then the tide turned, and queries began to be put as to the extent of the fire, the delay to shipments, etc. When it became known that the delay would be but three weeks' duration the former depositors began to flock back again, thinking, of course, they would be given their old places of delivery dates. Then it was Harry E. Pence's turn. He politely but firmly informed the hasty ones that they would have to go to the bottom of the list, and begin all over again. Their feelings can better be imagined than described.

"Trying out" Columbia Cars.

The daily testing of Columbia gasoline cars by the "try-out" crews of the Electric Vehicle Company is one of the sights that interest strangers visiting Hartford. The machines are given their trial runs in the rough, and the "try-out" rigs present a strange contrast to the general aspect of refinement and luxury that marks the finished vehicle. Each car tested is run many miles over all sorts of city and suburban and country roads.

and dangerous character that the journey was deemed impracticable.

De Sierto is 3,000 feet above Mexico City, and it was necessary to travel eighteen miles to reach it. The rise, however, is practically all made in four miles, the grade being as extreme as 23 per cent in some places. Notwithstanding this, the journey was successfully performed, the start being made at 8 a. m. Luncheon was eaten in the forest, and the party reached Mexico City on the return at 6 p. m.

Place Erects \$10,000 Garage.

Dixon W. Place, of South Bend, Ind., has taken out a building permit to erect a three story brick and stone automobile salesroom, 100x66 feet in dimensions. The building will cost \$10,000.

Prosperity at Chippewa Falls.

"Another evidence of prosperity," is the way the Chippewa Falls, Wis., "Independent" chronicles the advent of three Rambler cars which were delivered to their new owners last week.

AN UP-TO-DATE FACTORY

A Run Through the Locomobile Plant at Bridgeport Reveals an Almost Ideal Establishment—Day and Night Shifts Employ 700 Men.

Few concerns in this country are as happily situated in respect to the location, size, equipment and arrangement of their plants as is the Locomobile Co. of America. There are larger automobile plants and others as modernly equipped, but for a happy, almost perfect, combination of everything that goes to make up the ideal factory, the establishment at Bridgeport, Conn., is unexcelled, even if not unequalled. An abundance of highly skilled labor, shipping facilities of the best, a roomy, compact, homogeneous, magnificently lighted factory, ideally laid out, equipped with the best product of the machinery shops, amply powered, no single requisite of economical, speedy and thoroughly workmanlike manufacturing is missing.

PRESENT FACTORY OCCUPIED IN 1900.

In the summer of 1900 the Locomobile company centred its operating forces—hitherto loosely grouped at Worcester, Newton and other Massachusetts points—at Bridgeport. On the outskirts of the town fifty acres of land—then of comparatively little value, but since materially appreciated by what the followers of Henry George term the "unearned increment"—had been purchased abutting directly on Long Island Sound, and here substantial and enduring factory buildings had been erected and made ready for occupancy. They consisted of a four story and basement main building, a one story and basement annex, used as a power plant, and a one story building used as a garage and storage house. The main building was the typical New England factory, set in an open plot, and therefore open on all sides, with hundreds of windows and raised story on story—the last in contradistinction to the Western plan of building with but one story. Originally designed to produce steam vehicles, the exigencies of time have caused these to occupy a subsidiary position, the factory having gradually been turned over to the manufacture of the gasoline type of car.

When a Motor World representative visited the factory last week, he found it a true hive of industry. Since the middle of February the plant has been operated day and night, and at the present time some seven hundred men are busily engaged turning out Locomobile touring cars at the rate of almost twenty finished vehicles a week. At this rate orders are being slowly filled; but no cars for stock are on view either at the factory or at the salesrooms in this city, nor are they expected to be until June next. Every car turned out is on order, and is snapped up by its owner as soon as it is ready.

Under the pilotage of Sales Manager Kingman the Motor World man first visited the

power house annex. Here are located a battery of three return tubular boilers, the chief one, a tandem compound, being rated at 500 horsepower. This runs a dynamo which supplies the factory with both light and power. In distributing the latter a mean is struck between the rival systems now in vogue—one making use of a vast amount of shafting and the other employing a multitude of small dynamos, which are coupled up to the various machinery units.

MUSEUM OF ANTIQUE MODELS.

Connection is made between the annex and the main building by means of a subway leading to the basement of the main building. The passage takes one through the "museum," which offers a fruitful field for the researches of the automobile antiquarian. It is a veritable limbo of forgotten steam vehicles—Locomobiles in all stages of development and evolution, Overman relics, etc. In passing were noticed the Locomobile racer which cut a wide swath on Long Island and Staten Island in 1901 and 1902, and which participated in the 1902 endurance contest; buses used to carry the mails in Porto Rico, and weird and wonderful concoctions, many of them built to the order of ingenious and enthusiastic motorists of an earlier day.

Reaching the main building basement a good example of the thorough and far reaching system on which the entire establishment is run was encountered. Arranged in order, and with a custodian in charge, was the raw material for the cars. No delivery is made without a written order specifying the kind of stock and for what it is required. In solidly built racks were placed hundreds of bars of steel, each one painted, both on the ends and along the outside, with a certain color paint. Hanging against one of the racks was a board, marked off in sections, each section painted a color to correspond with the color on the bar of steel, and each color on the board having the name of that particular steel opposite it. For example, "Low Moor Iron," a special brand of imported stock, was marked a bright red. Scattered through this portion of the basement were a number of automatic hack saw machines, busily at work cutting off sections of huge steel bars, some of them six and eight inches in diameter.

DROP FORGING DEPARTMENT.

Ascending to the ground floor, the drop forging department was first inspected. The importance of this section may be understood when the practice of the company with respect to forgings and castings is known. The former are employed for all parts which have to undergo or be subjected to any strain whatever; the engine cylinders, the transmission gear and jack shaft cases and the engine base are the only castings, aside from a few small and non-essential parts, used in the car. It is worthy of mention, as illustrative of the scientific manner in which the stresses and strains to which each part is subjected has been studied, that the transmission case is a composite. The centre, to which the shafts are attached, is made of a

special manganese bronze of exceeding toughness, capable of withstanding a strain of 68,000 pounds to the square inch, while the upper and lower parts, which merely form coverings for the gears and other parts, and on which no strain comes, are cast in aluminum.

The drop forge department contains six big steam hammers—the largest of them a 1,500-pound size—and a number of smaller ones, together with the necessary furnaces, etc. Here the entire line of forgings used in the car, excepting the engine crank shaft, are dropped, hot, including the axle ends, valve stems, connecting rods, etc.

Adjoining the forge room is the smith shop, where eight forges are installed and the welding of axle ends and other parts is performed. Here, too, the sole brazing operation is done, it being the bracket for the front lamps. In a corner, and up a short flight of steps, is the sand blast room. To be quite exact, it is not a sand blast at all; instead of sand a special quartz is used, noted for the sharp, abrading edges of the crystals, which are much larger than the coarsest sand. Not only castings, but a large number of other parts are subjected to this quartz blast, notably car frames, mud guards, etc., it being found that the process leaves them in a condition to cause the coating of enamel to adhere with remarkable pertinacity.

HARDENING AND TEMPERING.

The hardening and tempering furnaces were next inspected. A feature of the Locomobile car is the care which is bestowed on all the small parts. All screws, bolts, nuts, valves, gears, etc., are hardened and tempered. They are packed in steel boxes, with a covering of ground bone and sometimes scraps of leather, and placed in the furnaces, which use crude oil for fuel, as do the smith forges. The tempering is done in oil, and each piece is carefully tested to see that it is just right.

Attention was next given to the frame assembling and main machinery departments. The Locomobile company pin their faith to the channel type of frame. The channels are rolled by the Cambria Iron Co., those for the main frame coming to them in two pieces of such shape that when welded—two welds, one at each end of the frame, being necessary—they form the rectangle of the main frame. To this is riveted the subsidiary frame, which carries the motor and transmission gear. In this, as in all subsequent stages of assembling, the work is done in jugs, thus insuring interchangeability of every part. The remarkably well finished and clean cut character of the frame and its parts is very apparent at this stage of the work.

At this time the machinery department is being run full blast. Two floors are given over to it, the lower to the heavy machine tools, such as turret lathes, boring mills, planers, milling machines, etc., the upper to the smaller ones, such as drills, lathes, shapers, etc. Together they formed a bewildering array, each floor having a

length of approximately 300 feet and a width of about 75 feet. A more than ordinarily interesting operation was that of a vertical boring mill on the special manganese bronze brake drum, and various roughing and finishing milling machine operations on the huge crank shafts with four throws. The latter, from its size and importance and the number of operations through which it passes from the time it enters the factory in its original state as a rough forging, cannot fail to come in for a good share of attention. Of special interest, too, is the number of inspections it receives, being micrometer gauged by the workmen and independently. A striking spectacle was a row of sixteen of these four cylinder crank shafts, finished and set in a row awaiting the final inspection. The tests to which the vaporizers are subjected are scarcely less interesting. They are set up in a testing stand, the float vessel with its float of spun copper, a fine specimen of the metal worker's art, filled with gasoline and the needle valve adjusted to exactly the right degree. A detail, but one worthy of note, is that the stop cock used for drawing off the dirty or stale gasoline has its handle so arranged that when it is turned down the cock is closed, a position in which it is least likely to be jarred or pulled open. On this floor all grinding of valves, etc., is done, and stress is laid on the fact that emery is never used in this work. A large and well arranged tool room, well protected by gratings, is on the lower of the two machinery floors.

ASSEMBLING THE ENGINES.

In the engine assembling room much slow and toilsome work is performed. The scraping of bearings by hand, which is only one of the many hand operations being done, is an instance. The Locomobile company are firm believers in plain bearings. The journals are made of a special composition of phosphor bronze, carefully turned, then scraped by hand and provide with ample lubrication devices.

As is to be expected, the engine is the part upon which the energies of the testing department are focused. Each separate part is tried, examined and compared, and as the work of assembling goes on the scrutiny becomes closer. The flywheel balance, the fitting and timing of the valves and of the piston and piston rings, the compression, the cam shafts—every part is examined and seen that it will do its share of the work properly.

When all have emerged successfully from this test and the engine has been entirely assembled, it goes to a room devoted to the final test of all. Here it is set up and coupled to a dynamo. Starting with 10 or 12 horsepower—in the case of a four cylinder engine—the engine is speeded up to about 22 horsepower, although as high as 26 has been developed from some engines. No less than twenty readings are taken from the dynamo, so that a perfect record of the performance of each engine is taken and carefully preserved.

An electro-plating department is devoted to

the work of depositing on the various levers, rods, steering wheels, hub caps, etc., the copper plate which gives them the finish so much admired. A tin and copper shop, where mufflers, gasoline and lubricating tanks, mud guards, etc., are turned out, is on this floor, as are drafting rooms and a pattern shop.

TESTING BATTERIES WITH LIGHTS.

A room the importance of which is out of all proportion to its size is the electric department. Here everything pertaining to the igniting apparatus is either tested or manufactured—mainly the latter. Batteries are given an infallible test; they are coupled on to incandescent lights and careful readings of their voltage and amperage taken, after which they are tested on the sparking plugs. Coils of high tension wire form an interesting study. When completed they are more than half an inch in diameter, this thickness being made up of a tiny copper wire in the centre, surrounded by a generous layer of soft rubber, then a layer of hard rubber, then the insulating material—a sort of webbing. The ends of the low tension wires are wrapped with ordinary manilla twine, with a coating of shellac. This cheap, common article of commerce appears incongruous, but the concern finds it the most satisfactory material for the purpose of all the number that have been tried.

The bodies are not made on the premises, most of them being made to order by well known coach builders. They come in the rough, upholstered, and are painted and varnished in the departments provided for that purpose, which are complete in every detail. The enamelling department consists of eight large ovens of most approved design and construction.

CARS RUN ON THE ROAD.

Each car is tested by driving it for a distance of two hundred miles on the road; shop tests on prepared tracks are held in little favor. The car is rigged up with old tires, without a body, a seat being improvised for the chauffeur and the muffler cut out. It is then "turned loose," with the result that if there is anything that has escaped the previous tests it is now discovered. At the end of two hundred miles the car is brought into the finishing room for cleaning and finishing. Every part is then gone over and cleaned and polished, the chassis and wheels painted and new tires and the body put on and the entire machine made ready for delivery to its owner.

A look around the assembling room showed eighteen chassis in advanced stages of completion, some of them having the bodies fitted and being practically ready for shipment. Conspicuous among the latter was an extremely handsome blue car, with canopy, which was most luxurious in its appointments.

Opens Store at Lima.

H. A. Mack, formerly manager of Haynes-Apperson's Chicago branch store, has opened an agency in Lima, O. He will, of course, handle the Haynes-Apperson, and also Cadillac and Olds machines.

Wridgway has Ingenious Carburetter

An ingenious and practical carburetter has been devised by C. G. Wridgway, who, in addition to being the successful manager of the metropolitan store of the Banker Bros. Co., is a clever mechanic. Application has been made for a patent on the device, and the drawings are now in the Patent Office at Washington.

One of the carburetters has been fitted to a Peerless car, and with it Wridgway gave a Motor World man a demonstration last week. The demonstration showed very clearly that the claims made for the carburetter were well founded. The flexibility of the engine was measurably increased, and the range of speed control varied from a mere crawl to a very rapid rate.

The carburetter is of the familiar float feed type, compact of size and water jacketed. Its peculiar feature is a combined piston and cut-off fitted in the mixing chamber; the former has a saw toothed edge, and as it is brought into operation the emission of the mixture from the mixing chamber is lessened and finally almost completely throttled; while the cut-off closes the air port and operates to increase the richness of the mixture delivered to the engine. With both the piston and the cut-off open, the full air supply is being taken in and the full supply of mixture delivered to the engine; as they are brought into operation, the quantity of mixture is decreased at the same time that its quality is enriched. The carburetter is connected to the engine governor, and works in accord with it.

It is the intention of Manager Wridgway to manufacture and market the device. Several of them have already been turned out, and if they give the expected results they will be made on an extensive scale.

Caused by a Misplaced Cut

Usually urbane, J. W. Bowman, sales manager of the Fisk Rubber Co., has been not a little ruffled during the last fortnight. It all came of an unfortunate error that crept into the Motor World of April 14, when in the Fisk advertisement the cut of another tire was used. Bowman made a flying business trip about that time, and says that everywhere he went the advertisement was remarked and the question, "Have you brought out a new tire?" was asked. When he returned to the office at Chicopee Falls letters asking the same question were awaiting him, and have since continued to pile up. It gave the Fisk people a good idea of the manner in which the Motor World gets about, but has been productive of so much misunderstanding that the issuance of a circular of correction has proved necessary. That the Fisk tire, with its splendid principle of detachability, has not been altered goes without saying; it has given such satisfaction that alteration is not needed.

The Royal Motor Car Co. begin shipping their four cylinder cars this week. A considerable number of advance orders has been booked, and the car has attracted much favorable comment.

THE CADILLAC FIRE.

(Continued from page 167.)

saved. Such was not to be the case, for the fire, relentless in its fury, swept with terrific heat against the fireproof door, melting it, and, the last obstacle of its progress removed, swept inward, licking up everything in its path and consuming every one of the fifty-six machines, and half destroying the walls and floor before its progress was checked. To-day as we saw the wreck and ruin of these machines, the sight reminded one of a morgue. There they, or what remains of them, lay, their once symmetrical proportion distorted and bent to a mass of shapeless iron, steel and brass. Some idea of the fierce heat may be had from the fact that the brass steering wheels were melted right down to the steering post and solid brass castings reduced to shapeless masses. A peculiar feature was that, while several of the tanks were filled with gasoline, not a single one exploded, but were bulged out and distorted out of all semblance of their original shape.

While the extent of the fire was great and the havoc wrought considerable, it is a peculiar feature that what may be termed the vital portions of the plant remain intact. Agents of the company and the thousands of buyers everywhere may take heart that a catastrophe severe enough on its face has not, however, caused the damage which was first feared and which many are inclined to believe. Further than this there has been, perhaps, no more remarkable exhibition of the great American quality of energy than that evidenced by this same Cadillac Automobile Co.

While the fire was in progress a board of directors' meeting was held, plans formulated and contracts given for the immediate resumption of work. If, as the old Grecian philosopher has it, "Difficulties are the things that show what men are," then the Cadillac Automobile Co. men have shown themselves to be made of metal of the true ring. Fortunately, there were two of the stockholders who are directors of the insurance companies through which the buildings are insured, and such is their standing that before the engines had ceased playing the permission had been secured to commence the removing of the debris, pending an adjustment. In this connection, too, it may be observed that there is probably not another automobile manufacturing company in this country that could so quickly recover from the effects of a fire. This is largely due to the fact that the vital portions of the machines are made in other plants by specialists, the work at the Cadillac factory being largely of an assembling nature. This, in connection with the practically limitless resources of the company in a financial sense, makes the work of renewal a comparatively simple matter.

A commendable thing in connection with the catastrophe was the reassuring candor of the company in their statement as to its effects. The very day of the fire a statement

was prepared and issued to their agents, stating that the fire would entail a delay in deliveries of about four weeks. The wise-ones immediately gauged this to mean at least sixty days, but such is far from being the case, and later conditions warrant the statement that the Cadillac company overestimated rather than underestimated the extent of the damage done. As things now look it will take but about three weeks before they will be in practically the same position as they were before the disaster overtook them. Aside from the toolroom, which is not injured in the least, and which, together with the complete sets of dies, tools, etc., was saved, a stock of over two thousand motors, together with axles and other parts, etc., is located in the 300 by 180 foot warehouse across the street, and which was untouched by the fire. This has been turned into a huge assembling shop. Additional buildings in other parts of the city have been secured, and work is now in full blast. Every one of the six hundred employees is hustling night and day, turning out completed machines. It seems somewhat strange that the very day of the fire a new shipping record was about to be established, as the day before a high record mark of forty complete Cadillacs was made, and on the ill-fated day the fifty-six machines before referred to as having been destroyed would have been shipped.

After a careful review of the plant and the amount of stock on hand, it seems a safe statement to make that Cadillac agents need have no fear but that their demands will be fully met, with a delay, as stated, of not more than three weeks.

When Reheating is Disadvantageous.

It is a well recognized fact that "puddled" iron is improved in quality by being cut up, reheated, rerolled and hammered. Its qualities are further improved by the repetition of this treatment. It might be inferred that by repeating this process several times the quality of the iron could be very highly improved, but it is found in practice that two reheatings produce the best result possible.

It has been proven by experiment, where bars were reheated as many as twelve times, that deterioration set in after six reworkings, and frequently earlier. After the third reheating no economic advantage was obtained commensurable with the cost of labor and fuel.

The tensile strength in pounds per square inch was found to be as follows: First working, 43,900 pounds; second, 52,868 pounds; third, 55,580 pounds; fourth, 57,340 pounds; fifth, 59,580 pounds; sixth, 61,820 pounds. After the sixth the declining ratio was about the same as the increasing ratio from the first. The twelfth reworking showed a tensile strength of 43,900 pounds.

A new retail store has been opened at No. 234 Jefferson avenue, Detroit, Mich., by the Ford Motor Co. Charles A. Grant has been placed in charge.

German Artist Invents Speed Indicator.

Advices from Germany state that Herr Hans Dahl, the famous painter, who lives in a fashionable suburb of Berlin, is the inventor of an ingenious automatic speed indicator for motor cars. His invention has been only recently perfected, and its manufacture on a large scale will soon be begun.

The indicator consists of an apparatus attachable to any motor car in proximity to the wheels. A belt or chain transfers the motion of the wheels to the apparatus, within which are fixed to a vertical axis a number of horizontal springs of varying strength. The latter are set revolving by the motion of the wheels, which, as they reach a certain degree of speed, cause a contact between one of the springs and an electric wire connected with a disk, upon which the degree of speed is indicated automatically by varying colors.

If, for instance, you go at the rate of fifteen miles an hour, a large opening in the disk will be filled by a green sheet. If the speed be increased to twenty-five miles, another spring in the apparatus, a little stronger, will cause the electric wire to replace green by red. If you reach thirty-five miles, a third spring, still stronger, makes the disk show blue, and so on. The colored sheets indicating the various degrees of speed are of transparent material, and when illumined are visible at night.

Goods and Prices Right.

Attractive terseness and condensation mark the complete and interesting catalogue just issued by the Automobile Equipment Co., of Detroit, Mich. The catalogue is of handy pocket size, and the announcement that "A dollar spent is a dollar saved," with the qualifying statement, "When you spend it with us," ought to appeal to every dealer.

Rain aprons, chain boot and engine cases and wet weather equipment generally come first, but, as the company hasten to announce, they don't stop there, for there follow touring cases and hampers, initial and license numbers, dos-à-dos seats, canopy tops, lubricators, lamps, horns, bells, sparking apparatus, tires, chains, and, in short, a full line of sundries and parts—all at prices that are likely to make the dealer sit up and take notice.

Deleterious Particles in Dirty Oil.

One point that can scarcely be too strongly emphasized is the necessity for proper engine lubrication. A great number of motorists seldom give a thought to the matter of letting out the old oil from a crank chamber. It is a dirty job, so they just snap up their lubricator buttons and allow the engine to go on as usual. The chamber wants a good flushing out with kerosene occasionally, for it should be remembered that dirty oil is charged with metal particles in a very finely divided state, and consequently forms a first class grinding medium.

The Burlington Machine and Repair Company, Burlington, Vt., will shortly open an automobile show room.

HONEYCOMB COOLERS

Their Merits and Demerits Critically Considered —Principle Correct, Improvement Possible.

When the last Paris show was held, in December, 1903, it was noticed by keen observers that the honeycomb type of cooler had lost some of its popularity. Two years before it had first attracted general attention, and in 1902 it had threatened to carry everything before it, so eager were designers to copy the German car on which this cooling device had been a feature. At the 1903 show referred to its use was more general than ever, but the note of warning was struck by certain influential firms who were trying to supersede the honeycomb with one of various systems; the most prominent was a new type of disk radiator.

Inquiry developed the fact that this step was being taken in consequence of various troubles which had been experienced with the honeycomb cooler. The correctness of its principle and the splendid results obtained from it when in perfect order were not denied. But it was admittedly expensive, heavy and peculiarly liable to leak, to warp and even to go to pieces under the stress of hard usage. For these reasons a few makers endeavored to evolve something that approached it in efficiency while avoiding its weaknesses.

In this country the honeycomb cooler had a very limited use on native cars last year. But for 1904 it was long ago apparent that it would be very popular. Its merits were pronounced and evident, while its demerits could become plain only with more or less extended use. When, therefore, the reaction against it at the Paris show set in there was, naturally, some uneasiness felt by those makers who had decided to adopt it on their 1904 cars, many of whom had already concluded the necessary arrangements to do so. If the honeycomb cooler was already discredited a very serious mistake would be made by those adopting it.

As it has turned out, these fears have proven illusory. The honeycomb or cellular cooler is still in almost universal use abroad, and it seems much more probable that efforts in the future will be devoted to the remedy of existing defects than that it will be replaced by any other type.

The subject has received considerable attention at the hands of the Whitlock Coil Pipe Company, of Hartford, Conn. Their Whitlock cooler, by reason of its design and construction, possesses the virtues of the honeycomb type, while avoiding its shortcomings. The differences between the two devices are pointed out by Assistant Manager J. E. Lewis, of the Whitlock Company.

After touching on the honeycomb's loss of popularity, as revealed at the Paris show, he says:

"The action abroad was due to certain well defined causes which do not exist here.

In the first place foreign cellular coolers are very expensive, necessarily so because the small square, or hexagonal tubes of which they are composed are very much more expensive than the sheet copper used in the American type.

"Another element in the situation is the fact that the 'nested tube' type of cellular cooler is unmechanical in construction, requiring consummate skill in its manufacture, and even where most skillfully made, invariably giving trouble by leaking. The efficiency of this type of cooler, however, stands unimpeached, as does its beauty of design and general appearance.

"The multiple cylinder type of car with front vertical motors, has lost no popularity either abroad or at home, and wherever foreign makers have discarded the cellular cooler, they have filled its place in the front of the hood with a disk radiator made to look as much like a cellular cooler as possible.

"The fact is that the Whitlock cooler combines correct mechanical principles of construction with great economy of operation and at a reasonably moderate expense. As compared with the Mercedes type, the Whitlock is not, properly speaking, a cellular cooler at all, but stands in a class by itself. It is not open to the objection, often raised against the Mercedes, as the typical cellular cooler, that it proverbially leaks. On the contrary, it gives remarkably little trouble on this account, no more than is experienced with the ordinary disk type of radiator. It is not composed of an aggregation of loose tubes merely held together at the edges by solder as in the original cellular type where the constant twisting and vibration invariably strains the tubes apart, causing leakage even where the cooler is perfectly tight at the start. But in marked contrast with this, it consists of a series of corrugated sheets extending in continuous lengths from top to bottom of cooler. The effect of this continuity is strength, not rigidity, for the corrugations make the cooler very flexible, so that the twisting, straining and vibration of the severest usage have no power to loosen the joints or cause leaks.

"Furthermore the flexibility of the corrugations is a safeguard in cold weather. The Whitlock cooler is less likely to be frozen up than the tube and disk type on account of its compact structure and the absence of natural circulation of air, but it is also better fitted to withstand uninjured any accident of this kind. A tube and disk radiator is invariably broken and frequently wholly ruined by being frozen once. The past winter, has, however, developed scarcely a single case of serious injury to a Whitlock cooler by freezing—in fact, one case has come to our notice where a 25 horsepower cooler has been in constant use all winter, having been frozen up solid at three different times without the slightest injury or repair. This particular cooler, although in constant use since last June, has never given a moment's trouble on any account.

"The saving in weight effected by its use is a strong point in favor of this type of cooler. Two actual cases will suffice to illustrate. In the first, the original cooling system comprised a radiator and a six gallon tank of water, together aggregating something over eighty-five pounds. This was replaced by a Whitlock cooler weighing twenty-eight pounds and carrying a little over two gallons of water, so that the total weight is now under fifty pounds, a saving of about 42 per cent.

"In the second case cited, the original system, including a disk radiator of special design and a fifteen gallon tank of water, weighed over two hundred and fifty pounds. In place of this was substituted a Whitlock cooler weighing seventy pounds and carrying four gallons of water, a total weight of a little more than one hundred pounds, a saving of 60 per cent of the original weight of the cooling system.

"The fact that there is little or no evaporation in this type of cooler absolutely prevents the deposit of lime. This also prevents the necessity and annoyance of frequent filling. To be able to run one thousand miles without a thought of your cooling system is certainly no small advantage.

"It also offers no resistance to the flow of water, thus relieving the pump from pressure and taking this load off of the engine while allowing very rapid circulation of water, which is fundamental to efficient cooling. In addition to this the water piping is simplified and the system as a whole takes up less room on account of the omission of an extra tank and the necessary piping which goes with it."

To Save Tires From Cutting.

A careful driver becomes much exercised as to how he may do his tires the least possible amount of harm when passing over a newly laid patch of stones. The general method is to drop down on to the bottom speed and go over as gently as may be, yet this oftentimes results in the tires being badly cut.

Now, if when approaching a patch of loose metal the car is allowed to run right up to it at speed, and the clutch is taken out before the front wheels strike the stones, the vehicle will have sufficient momentum to carry it over the average patch of stones. By this method of driving the wheels are relieved of all driving strains and the tires are less likely to be damaged, as they simply roll over the stones and are not subjected to any other severe strains than the dead load. This may seem a daring practice, but it is an effective one.

If by reason of the length of the newly stoned road or an adverse gradient the car cannot attain sufficient speed to roll over the metal, nothing remains but to drop to the low speed and go on gently. On no account should the clutch be let in so that momentum may be maintained, as immediately the engine begins to drive when the gear ratio speed is above that of the speed of the vehicle the very worst cutting action is put on the tires.

OFFICIAL BIG GUNS AND BAND

They Will be at Head of A. C. A.'s, Hastily Arranged, First Annual Parade.

With a bandwagon in front, propelled by electricity, and a Democratic Mayor behind it, ahead of all others, in a car driven by a gasoline motor more regularly explosive than even a Tammany orator, the Automobile Club of America proposes to hold its first annual parade on Saturday of this week through the streets and parkways of New York City.

It was not until Friday of last week that the affair was definitely settled upon for April 30, and the runs and tours committee have in consequence had only a week in which to make the arrangements and do all the work. The committee, with Emerson Brooks as chairman, went to work with a will, however, and on Saturday of last week placards appeared in windows of various automobile stations about town announcing the parade. This was quick work, but that was not all that had been done. A meeting of the runs and tours committee had been held and the route laid out and the order of the divisions in the parade arranged, the positive assurance of Mayor McClellan that he would lead the parade had been obtained and the various retail dealers and branch managers had been enlisted to write to all of their customers urging them to participate.

Thus the present week began with all of the most important features of the affair arranged for the last day of April after there had been a couple of changes of date since the first proposal of the scheme. The date had to be changed from May 14 because that had been selected for the parade and speedway brushes of the Road Drivers' Association. May 7 was next selected, but it was found that this was the date for the police parade and the Mayor could not lead the automobiles that day. The Mayor is now the possessor of a new Decauville car, and although he has been held up three times by the police in as many weeks for exceeding the speed limit, it is expected that he will be able to lead the parade without being arrested.

The divisions, with marshals and places of assembling, have been assigned as follows:

Chief marshal, Emerson Brooks, chairman runs and tours committee.

First Division—Guests; George R. Adams, marshal; assemble in East Fifty-eighth street.

Second Division—American gasoline touring cars, Milo M. Belding, marshal; assemble in West Fifty-first street.

Third Division—American gasoline runabouts, Frank Eveland, marshal; assemble in West Fifty-second street.

Fourth Division—Foreign built automobiles and racing car section, Robert Lee Mor-

rell, marshal; assemble in West Fifty-third street.

Fifth Division—American steam pleasure vehicles, Augustus A. Post, marshal; assemble in West Fifty-fourth street.

Sixth Division—American electric pleasure vehicle, C. H. Gillette, marshal; assemble in West Fifty-fifth street.

Seventh Division—Electric cabs, W. H. Brown, marshal; assemble in West Fifty-sixth street.

Eighth Division—Commercial vehicles, J. D. Rainier, marshal; assemble in West Fifty-seventh street.

Mr. Winthrop E. Scarritt, president of the Automobile Club of America, will lead the procession with the chief marshal. They will be followed by George R. Adams's six seated Apperson car, carrying some of the city officials, who will be guests of the club. The big Napier Pullman car is likely to be utilized in a similar manner. Mayor McClellan will probably drive his own Decauville car.

Vehicles are to assemble at the various places assigned to them at 1:30 p. m. and be ready to start at 2 o'clock.

The parade will begin to move from Fifth avenue and Fifty-eighth street at 2 o'clock, the grand marshal, Mayor and first division starting from there, while the second division moves up from Fifty-first street, the third from Fifty-second street, and so on. The vehicles will enter Central Park at Fifty-ninth street, and following the East Drive to McGowan's Pass Tavern, where it will cross over to the West Drive, proceed south to Seventy-second street, thence to Riverside Drive, to and around Grant's Tomb, returning via Riverside Drive. Seventy-second street, West End avenue, Seventieth street, Broadway and Fifty-ninth street to Fifth avenue. It will be reviewed from the windows of the Automobile Club rooms, at Fifth avenue and Fifty-eighth street, south of which point those in line may withdraw.

When the second section reaches Fifty-ninth street and Broadway, the line will be halted for five minutes to afford the first section, including officers of the club and guests, time to take their positions in the club windows for the review. The divisions will be 100 feet apart, with two bicycle policemen riding between each two.

Many club members, including some of the most prominent automobilists on this side of the Atlantic, have promised to place their machines in line.

All the major city officials, including the Mayor, the members of the Board of Aldermen, the commissioners of Police, Parks and other civic departments, and the city magistrates are to be invited to become guests of the club for the occasion. To these no less than to the general public the affair is expected to afford an impressive object lesson of the great growth of automobilism in this city and the factor the motor vehicle has become in the use of the public thoroughfares.

For the benefit of the guests it is planned that the legal rate of speed will be main-

tained throughout, including the park limit of seven miles an hour while passing through Central Park and along Riverside Drive. It is believed that this speed will seem so unnecessarily slow in comparison with the gait of other vehicles travelling over the same driveways that those in the parade will be convinced of the wisdom of raising the limit.

The commercial vehicles will not go through the park, but will go around it and fall in at the end of the procession when it emerges from the park at the West Seventy-second street entrance. A special permit has been obtained for the wagons and trucks to keep in line along Riverside Drive, which is contrary to the regular rules.

There are to be no decorations, and no advertising signs are to be carried in the commercial vehicle section. No entrance fee is to be charged. Every owner of a motor vehicle in this city is invited to form in line for the good of the cause.

After the review the guests and the owners of machines carrying them will be entertained informally at luncheon in the clubhouse, together with members of the club who may participate in the parade.

What Hausman was Suspended for.

When Esau traded his birthright for a mess of pottage he made a fairly good bargain, and Benjamin Franklin bought his whistle cheaply, if we compare those transactions with the deal recently made by E. C. Hausman, Barney Oldfield's recent racing partner. Hausman was suspended at the same time as Oldfield. Barney has been let off with a fine of \$100, but Hausman elected to race again at Memphis a week ago last Sunday. This is what the Memphis Scimitar said about the races:

"The automobile races at the Memphis Trotting Park yesterday afternoon turned out to be scarcely worthy of the name,

This is what the racing board of the American Automobile Association said about the event:

"Whereas, Mr. E. C. Hausman has, notwithstanding his suspension for competing in various unsanctioned events (April 5), again, knowingly and wilfully and in spite of warning, competed at an unsanctioned event in the city of Memphis on April 17, 1904; therefore,

"Resolved, That a fine of one hundred dollars be imposed on Mr. Hausman, and that his suspension be continued until October 1, 1904.

"This suspension carries with it an immediate disqualification, under the rules, of any driver who may compete with Mr. Hausman at unsanctioned events."

Oldfield Goes With Winton Again.

Following his reinstatement by the A. A. A., Barney Oldfield has been reinstated also in the employ of the Winton Motor Carriage Company. If the Bullet No. 2 is accepted for the international race, it is almost a certainty that Oldfield will drive it.

LONG ISLAND A. C. TO BUILD

A Subscription of \$10,000 Already Raised and a Site Secured.

Elaborate plans are being made by the Long Island Automobile Club for the erection of an expensive clubhouse, which, if followed out, will give Brooklyn the handsomest automobile plant in the country. Arrangements for the new clubhouse have been going along slowly and with no little secrecy. The members of the Long Island Club have felt a little uncertain about discussing plans, owing to their indefiniteness. Recently the club was notified that the present building on Hanson place would be torn down this spring to make room from the tunnel improvement. Though the club has not been in its present home on Hanson place more than a year, all the members were aware that their stay was to be short lived. The house committee has been active, and arrangements have been made whereby the present clubhouse will not be demolished until fall.

In the meantime a subscription list has been passed around among the members for a fund for the purchase of a site for the erection of a new clubhouse. A. R. Pardington, one of the most active members in the club, when questioned, said:

"The subscription total has now reached nearly ten thousand dollars, and there seems to be a perfect willingness on the part of all members to subscribe freely. A committee has been looking around for a favorable site for the new home.

"The committee has secured an option on some property near the Prospect Park plaza, as well as several other sites. We have several trust companies in Brooklyn and New York who stand willing to put up as expensive a plant as we want as soon as we acquire title to the property."

The present clubhouse has been more or less of an experiment. The members have seen it proven that a clubhouse can be made a profitable venture and at the same time a great saving of expense to the members, as against outside storage and repair plants. Some of the members agree that there is fully a 50 per cent saving. The Long Island Club has now a membership of over a hundred and seventy-five, and this number is on a steady increase.

There is prospect that the present clubhouse will have to go out of commission as far as storage is concerned in the very near future. The street is being ripped up for the laying of a sewer, preparatory to the construction of the tunnel, and it will be made practically impossible to keep a space open to a side street as soon as the work is fairly under way.

Glidden Will Have Company.

It develops that the Glidden party will have company part of the way on its forthcoming around-the-world tour. Dr. C. T. Clif-

ford, of Lowell, Mass., a fellow-townsmen of Mr. Glidden, will accompany the latter during the first three thousand miles of the run, starting from Liverpool about the middle of May. A single cylinder 6-horsepower waterless Knox runabout will be used by Dr. Clifford. It is the same that he has driven during the past two years, and in which he has such great confidence that he prefers it to any new machine.

Light Company's Handy Vehicle.

The Hartford, Conn., Electric Light Company is a staunch believer in the self-propelled vehicle. It has tried them and knows. About half a dozen of them are maintained in service by the company, from big trucks



used in hauling materials and supplies, to the little wagon here shown.

The latter is employed in carrying the sticks of carbon with which the street arc lights are daily renewed. Formerly men with bicycles and ladders were made use of for this purpose, but the present method is found much more expeditious and satisfactory.

Hartford Bars Police Horses.

Hartford, Conn., lays claim to being the first American city to do away with horses and substitute automobiles for police department service. The automobile equipment, which was installed three years since, now comprises an electric patrol wagon and an electric ambulance. Chief of Police Cornelius J. Ryan states that these vehicles have entirely superseded two horse-drawn patrols, a horse ambulance and a "black Maria." The patrol covers the entire city, which has an area of ten square miles, and which has 90,000 inhabitants. The old equipment kept five horses in constant service. The chief shows interesting figures indicating that the cost of maintenance for the electric outfit is about 60 per cent of that of the old horse equipment.

Columbus Club's Membership Jumps.

The Columbus Automobile Club has increased its membership in one year from 25 to 125. The club last week voted unanimously in favor of the merger plan for the two national organizations.

FORD AND OTHERS OPPOSE LAW

Will Follow Schneider and Test Constitutionality of Detroit Ordinance.

The fight against the constitutionality of the Detroit automobile ordinances has taken another turn.

Henry Ford, of the Ford Motor Company, John F. Dodge and Horace E. Dodge, all well known Detroit automobilists, have brought suit against the city and the commissioner of police, asking that the ordinance, which was passed by the common council October 27, 1903, be declared unconstitutional and void and that the city be restrained from attempting to enforce its provisions. The suit is to be a test case, brought in the interests of Detroit automobilists, practically to ascertain whether the city has a right to make owners take out a license, to require them to register, and to compel them to attach to their automobiles any numbers or tags.

It is alleged that the ordinance is an unjust discrimination against automobile owners and operators; that its provision requiring owners or drivers to procure a license and attach to their vehicles aluminum figures, for which they are compelled to pay \$1 for each automobile registered, is double taxation of personal property; that the ordinance is class legislation and unjustly discriminates between owners and operators of automobiles and the owners and users of other vehicles in that the latter are not forced to attach tags or take out licenses, and are not deprived of the right of allowing children under sixteen years of age to operate the vehicles.

The complainants also aver that, because of the licenses, which must be again recorded, after every re-sale, they are compelled to make private business public.

It is further stated that no objection is made to the provisions of the ordinance requiring the placing of lights on automobiles, or governing the rate of speed on the city's streets. In closing, the complainants set up that the suit is brought in behalf of other automobile owners and operators in Detroit and for the purpose of preventing a multiplicity of suits.

Rodgers Heads Nashville Club.

The Knoxville Automobile Club, of Knoxville, Tenn., was organized last week with twenty-seven charter members and the following officers: President, Cowan Rodgers; first vice-president, Major C. H. Hudson; second vice-president, Dr. J. H. Kelso; secretary-treasurer, Henry Howard; executive committee, Ralph Rodgers, Dr. W. R. Cochran, William Ross, S. V. Chandler, the president and two vice-presidents.

The Automobile Club of Germantown, a suburb of Philadelphia, has purchased for \$3,000 the property at the southeast corner of Carpenter and Emilen streets. On the site a garage and clubhouse will be erected.

Electrolytic Process for Water Jackets.

Particulars of an invention which holds out considerable promise to automobile builders are given in a recent issue of The Car. Two Englishmen have hit upon a method of producing water jackets by an electrolytic process, very similar to nickel or copper plating. A very material reduction in the weight of cylinders is thus rendered possible, and the water jacket or envelope is made in one piece, without joints of any kind.

It is well known that a number of European firms have approached this problem by using steel cylinders and covering the barrel of these with a sheet brass or copper water jacket, but in the systems adopted the jacket has invariably been secured by some mechanical means such as soldering, brazing, etc. Either of these methods is, at the best, somewhat crude, while it is also expensive, and, if by any carelessness on the part of the driver, the supply of circulating water is allowed to run short, the result is usually serious.

The new method consists of electro-depositing the water jacket upon the metal of the cylinders and cylinder heads. In the first place an electro-deposition of copper is made upon the outer surface of the cylinder. This is then covered with wax (rendered electro-conductive) to the required thickness, and in such form and position as the water jacket is required. The copper depositing process is then continued until a sufficient thickness is

obtained over the wax and upon such surfaces of the cylinder as remain uncovered. By this means the continuity of the copper is insured, with the result that, after the wax has been melted out a kind of perfect water jacket, without joints and of an absolutely homogeneous nature, remains, even though the cylinder may be pierced at various points for the admission of sparking plugs, covers for valves, etc. The process takes but a short time, and the copper can be easily deposited of a sufficient thickness to withstand an internal pressure of thirty pounds per square inch, and stiff enough to be handled with safety. This method has also a great advantage in that it can be applied to cylinders made of any sort of metal and of whatever design.

It will therefore be obvious that the designer of an engine will be given a latitude which it is impossible for him to have when any of the present methods of construction are used. Furthermore, the cylinders can be machined all over, outside as well as in, and by this means defective castings would, of course, be detected before the work on them was completed. In addition the system is applicable to any design of cylinder, whether cast singly or in multiple.

The first experiment of the inventors was with a twin cylinder casting 4½-inch bore by 5½-inch stroke. This was quite successful. With an ordinary motor cylinder made, with its water jackets of cast iron, as at present constructed, a considerable margin of metal

must be given to allow for any possible variation in the thickness of the casting, either of the cylinder or the water jackets. The result is that a comparatively heavy and bulky casting is produced. It is also extremely costly to make, and manufacturers know too well what a large percentage of bad castings have to be thrown out. By this improved method a reduction of weight is made of over 60 per cent, while the difference in price is approximately as great.

Honeycomb Coolers and Condensers.

If history repeats itself in the events of life, equally so does the application of old devices to new purposes illustrate the value of those appliances and their adaptability. One is reminded of this by the fuss that has been made in some quarters on the "discovery" of the cellular radiator. Yet it is none other than the old fashioned steam condenser adapted to use air instead of water as the cooling medium. Take a radiator of this pattern and inclose it in a metal box fitted with two pipes, one leading into, the other out of it, and couple the one to a pump and the other to a discharge pipe, and you have the steam condenser in its simplest form. The efficiency of the steam condenser was measured by the smallness of its area for a given work, and good as are the results obtained with the honeycomb radiator, they are not equal to the best got in steam engine practice.

IMPERIAL WHEELS

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"MOTORING IN FRANCE"

**Incorporating the INTERNATIONAL MOTOR REVIEW,
a Monthly Illustrated Magazine**

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WHAT REGISTRATION SHOWS

New Jersey's Mill Grinds Out Touring Car Certificates—Natives are Backward.

The New Jersey Secretary of State's office is now being besieged by owners of automobiles for licenses, and the spring business in granting these State permits is now counted open. Automobile Clerk Transue says that the runabout vehicle has had its day in New Jersey, if his office is any criterion to go by. He says that the licensing of the smaller type of automobiles has fallen off fully 60 per cent this season. All the requests for

many people who licensed machines last season.

There are many transfers being granted, and all of them are for the smaller class of machines. This shows that last year owners are this year disposing of them, and the appearance of their names again as applicants for permits to run heavier machines shows the prevailing tendency.

Ferry To's for Motorists.

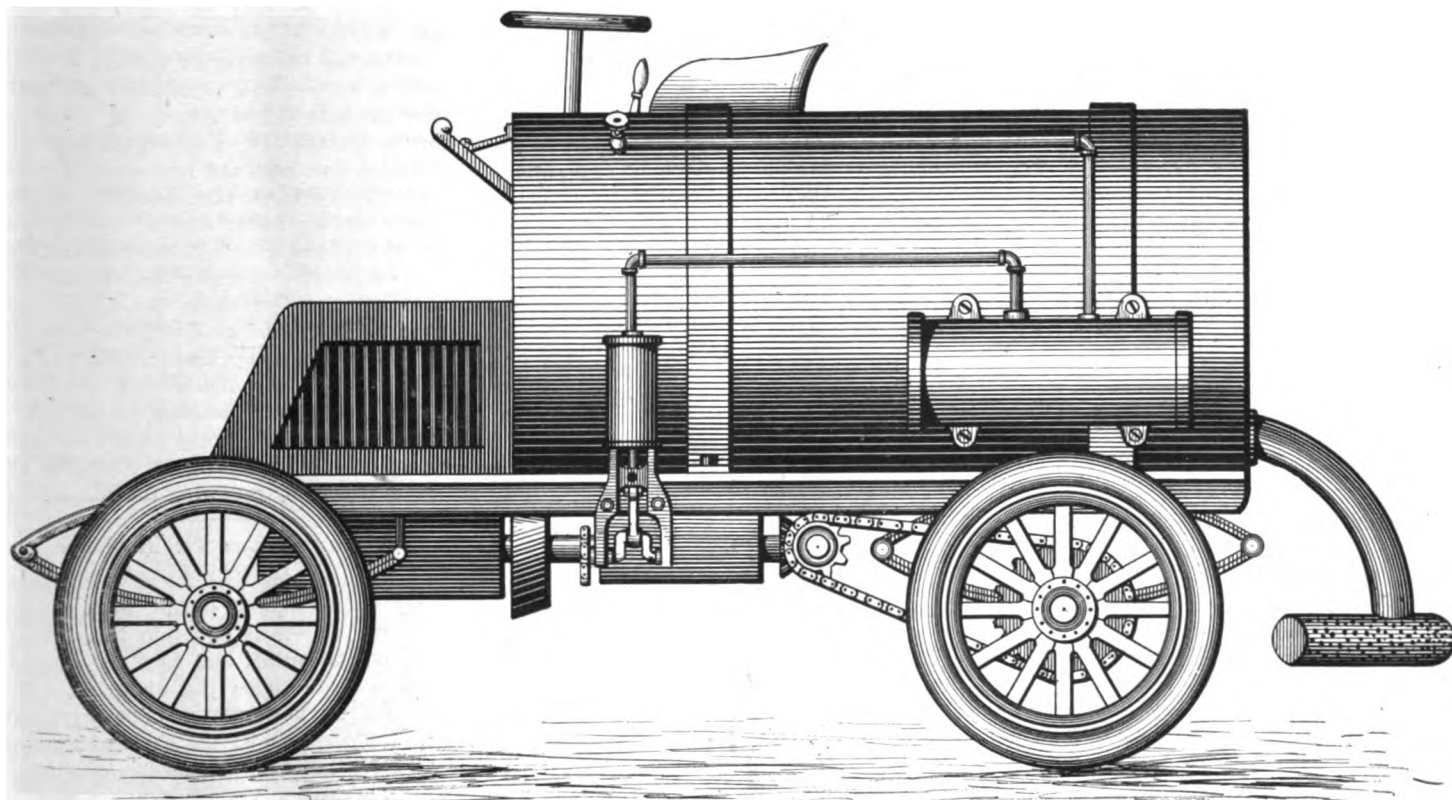
Because motorists have money they will hereafter have to pay double or triple rates of toll when they wish to cross the Connecticut River at Chicopee, Mass., by means of the ferry. Last week the County Commissioners fixed the rates of toll as follows:

HARTFORD'S AUTO SPRINKLER

Driven by Gasolene Engine and Does work of Three Horse-Drawn Vehicles.

A municipal service wagon of unusual interest has been designed for use as a sprinkler on the streets of Hartford, Conn. As will be seen from the illustration, it is a self-propelled vehicle, the power plant consisting of a 4 horsepower gasolene engine, located in front under a bonnet, and transmitting power through a shaft and double chains to the rear wheels.

The vehicle was designed by Edward Balf,



license blanks state that the owners of machines want licenses for the heavier and more powerful type of vehicles.

Nearly all the licenses granted during the month have been upon the application of residents of other States. This would indicate that the Jerseyman has not taken up automobiling as early this season as last year. Still, there has been a host of requests for license blanks from Jerseymen, and the automobile clerk concludes that the coming week will send him much grist. The total number of licenses issued since the law went into effect—March 23, 1903—is 4,903. This means that the State has received \$1 for every license, or a total of \$4,903. Of course, no part of this money will ever come again from licensing these machines, as the law makes one license do for the life of the automobile. It is the machine that is tagged, together with the owner. However, there seems to be evidence of more money coming to the department this year, in spite of the

For foot passengers, three cents, or five cents for a round trip. A one-horse vehicle, 10 cents, or 12 tickets for \$1; two-horse vehicle, 15 cents, or eight tickets for \$1; a single horse, or any beast, five cents each; automobile, 25 cents. The toll for the one and two horse vehicles, as well as for the automobiles, includes the driver or person in charge. All other passengers must pay the same as though foot passengers.

"Chicopee needs the money," one of the commissioners is said to have explained. "Anyway, the man who kicks at 25 cents is too poor to own an automobile, and the quicker he finds it out the better."

American Cars in Australian Run.

More than thirty motor vehicles were in the inaugural run of the Automobile Club of Victoria, which took place at Melbourne, Australia, recently. Among them were a number of American cars, including an Orient buckboards, two Wintons, several Locomobiles and no less than ten Oldsmobiles. The destination was Aspendale Park, some eighteen miles out of Melbourne.

president of the Edward Balf Company, which concern has the contract for sprinkling the Hartford streets, and is fully protected by patents. The sprinkling is done by a compressed air system. The air is forced up through a pipe running into the air chamber, thence passing through the pipe above into the tank and back to the connection with the sprayer. The discharge of water is controlled by the attendant operating the machine.

The sprayer can be gauged to cover forty-five feet, so that passing up and down a ninety-foot street does the work as thoroughly as the three trips required with the horse carts. There is also a great saving in the distance covered in a given time, as the horse teams covers only about 225 feet a minute, while the vehicle under notice covers 540. The saving of time in going to and from the water supply is still greater, which is quite an item when wetting macadamized streets, which require about one-third more water than the asphalt.

Novel Renault Cooling System.

Several new and interesting features have been incorporated in the 14-horsepower Renault car, chief among them being a novel system of water cooling. By employing it great simplicity has been attained, not alone by dispensing with the usual pump, but also in the matter of arranging the radiators. In this a very radical departure has been made from general practice. The radiators are mounted on the front of the dashboard, and above and below them are water tanks. The bonnet is of slim and graceful design, and makes an airtight fit over the engine, while the under portion of the mechanism is also thoroughly shut in. On the flywheel are formed blades which make this wheel a most effective ventilator when in motion.

The principle of the Renault cooling system is that the cool water in the lower tank on the dashboard and under the radiators is fed to the jackets around the cylinders, and being heated there rises and flows back into the upper tank which is mounted on the dashboard above the radiators. From this tank it passes down through the radiators and is cooled during its progress to the lower tank. The fanshaped flywheel assists very materially to bring about this cooling, for it exercises considerable suction inside the airtight bonnet. To fill the void cool air rushes in through the ribs of radiators to a hollow space between these and the dashboard. The air current then doubles back and enters the space underneath the bonnet and is finally sucked out by the flywheel.

The radiators are placed right across the dashboard, and a portion of them are thus under the bonnet. Before fresh air can reach the motor it must pass through the radiators to the space between them and the dashboard, and then back under the bonnet. By the action of the fanshaped flywheel a very powerful suction is caused underneath the bonnet, and thus a strong current of cool air passes through the radiators.

To Tow a Disabled Car.

There is a right way of towing a stranded automobile which should be known to every reader with a humane heart—this is, to employ two ropes which are attached to the sides of the towing car—what they are to be attached to must, of course, be left to the reader, but the ends of the rear axle, unless a live one, ought to be suitable. The ropes should then be crossed and fastened to the ends of the front axle of the towed car. There will be thus no slack rope when turning a corner, and the pull of the towing car will assist the steering of the second vehicle to some extent.

Why They Provide Cut-Outs.

"We find it necessary to provide a muffler cut-out on our cars, simply because customers demand it. They go to one extreme, we hold to another. If we had our way there would be no cut-outs used." The speaker is connected with one of the largest con-

cerns in this country, and he was thoroughly in earnest.

"Many drivers seem to think that the more noise their engine makes the better work it is doing," he went on. "If they cannot cut out their muffler, they cannot make a very great deal of noise; therefore they insist on cut-outs. It is an odd taste, but it undoubtedly exists."

New B. & S. Line of Hammers.

The Billings & Spencer Company, Hartford, Conn., are placing on the market a complete line of new octagon pattern drop



forged machinists' hammers, listed at a popular price and designed to supplement their regular B. & S. machinists' hammers, which the company will continue to manufacture.

The octagon pattern hammers are made



with three styles of peins—ball, straight and cross peins—as shown, and in weight ranging from four ounces to two pounds eight ounces. They are drop forged of special hammer steel, and the faces and peins are



polished. The handles are made of clear, thoroughly seasoned hickory, turned and fitted at the B. & S. works. The design and workmanship is fully up to B. & S. standards, and the hammers are thoroughly warranted.

Milwaukee's Motorist Councilmen.

Milwaukee now has two councilman-motorists. One of them, Sherburn M. Becker, has long made use of the motor-vehicle, while the second, George J. Loustorf, purchased a Winton only last week.

The business of the John H. Schmidt Co., 15 South street, Morristown, N. J., has been purchased by the F. A. Trowbridge Co., of the same town.

Adjustment of Governor Springs.

Persistent hunting or racing of the engine is by no means an infrequent source of unsatisfactory running, militating against comfort, economy and flexibility. The matter is one which it is difficult to remedy, in that the trouble commonly lies in the tension of the governor springs being either too great or too small. Springs with small variations in tension are difficult to obtain, at least in a graduated ascending scale of strengths, and, consequently, it is found that, whereas the original spring permitted the governor to act unduly at the slightest speed variation, the new spring practically obliterates the action of the governor, and the engine is difficult to control, although the difference in the two springs may be apparently very small.

In adjusting the governor springs one has, of course, to vary the adjustment according to the location of the spring. In some engines the springs are set across the points of the governor weights and revolve with them. With other patterns the spring is set between a sliding collar and a stop on the shaft. Sometimes a rocking lever working in a groove in the governor sleeve has the spring attached, though commonly this method is used for augmenting the strength of the governor springs and accelerating the engine. The most common and the most troublesome way of mounting the springs is between the governor balls, as in this manner there is no possibility of tensional adjustment except by renewing the spring.

Calculating Distance Per Revolution.

Most people know that the distance travelled by an automobile during each revolution of the wheels is equal to the circumference of the latter; and that the circumference is 3.146 times the diameter. The calculation is, however, a trifle involved, and as the decimals have a habit of slipping the memory the sum is possible only after looking the matter up. A simpler way of making the calculation is the following:

Have your vehicle carry an average load, and place it on a smooth floor or road; mark the tire and the road under the centre of wheel; then carefully pull the vehicle ahead in a straight line until the mark on the tire again comes under the centre of the wheel; mark the ground again opposite the mark on the tire. The distance between the two marks on the ground will be the distance that the wheel travels per revolution.

A Pneumatic Foot Cushion.

An English "wrinkle" is a pneumatic foot cushion, designed to do away with the vibration incident to a long drive in a fast car. It is an oblong box, with a slanting top containing an air cushion. The box is well made of polished teak, and highly finished. The air cushion is fitted with a Dunlop valve, which enables it to be inflated with an ordinary tire pump. The top being hinged, converts the frame into a useful tool box. It sells for about \$10.

FAVORS THERMO-SYPHON SYSTEM

British Writer Thinks it is Gaining Ground—
Some Improvements Suggested.

"It has been noted that there is a tendency to return to the old and simple means of circulating the cooling water in the jackets of motor cylinders by what is commonly called the thermo-syphon system," says a writer in the Motor News. "The Renault, Georges-Richard, Argyll, Brooke and Stirling cars are among the best known exponents of this method, and that these firms still continue to use it is adequate proof that they find it a success. Anything that tends to a reasonable reduction in the number of the working parts about a car is to be commended, and, given a really efficient gravity system of circulation, one can readily understand why any up-to-date maker will willingly adopt it.

"It would seem one of the first points to be provided is that the bulk of the cooling water shall be set at a sufficient height above the cylinder as to insure a rapid circulation or displacement of the heated quantity around the combustion chamber. The ordinary or stationary gas engine is a good illustration of a successful system of the thermo-syphon cooling, and it will be there noticed that the bulk of water carried is large, as also are the circulating pipes, particularly the return flow to the tank. A second feature to be provided is an ample capacity in the jacket itself, and generally, too, in the pipes that form the circulating system, their more or less freedom from rectangular bends, and the method of grouping them so that they shall present the largest cooling surface available. This is accomplished by similar methods in the Estcourt, Brooke and Stirling systems, and is also satisfactorily effected on the Argyll and Renault cars at a less altitude of fall, and in like manner on the Georges-Richard by a rectangular extension at the top of the radiator itself, which may be said to form a sort of tank radiator self-contained. We have alluded to the need of using pipes of large bore under this system; we might add the further suggestion that in the case of multiple cylinder engines these pipes be taken separately back to the tank radiator, or the alternative—but not as efficient a method—that recourse be had to running the return pipes into one of larger bore, preferably one with an area equalling that of the combined pipes.

"There is little doubt that the efficiency of the thermo-syphon system could be further assured if the method of branching off or joining up the separate pipes was more mechanically arranged. For instance, why use a T-junction piece when by grafting on, as it were, to the distributing member the subsidiary branches, ample brazing surface, which means strength and a minimum of frictional impact, would be obtained? The

water cooling arrangements on some cars still leave much to be desired, especially in the above respect, and that air locks are not commoner than they are in their circulation system is a fortuitous circumstance."

To Repair Water Jacket Cracks.

Contrary to the general belief, a small crack in the water jacket of an engine is a rather more difficult matter to deal with than one which is of larger dimensions. For in the latter case one can easily repair the fracture by means of what is known in the engineering world as a "rust joint." This is made by filling the crack with fine iron filings damped with a solution of sal ammoniac. This causes the surface of the fracture to oxidize, and with this the fine iron



filings would set in sufficiently hard to repair the fracture.

If the above treatment cannot, by reason of the narrowness of the fracture, be carried out, the repair will be more satisfactorily executed by simply soldering the fracture with hard solder. The surface of the jacket along the fracture should be filed bright and clean, and some acid soldering fluid run over the joint, if possible allowing it to run in through the crack, for which purpose it would be advisable to form a V-shaped channel along the crack by means of the edge of a file. The jacket should be well warmed by the aid of a blow lamp, and hard solder run into the fracture.

Nepeskun Motorists' Hard Lot.

Hereafter motorists will not count for much in the town of Nepeskun, Wis. Under an ordinance just passed, no machine will be allowed to exceed twelve miles an hour, and speed must not exceed four miles an hour on the crest of a hill. The automobile must be stopped if signalled to do so by the driver of a passing vehicle, and must remain quiet until the team has passed or it is signalled to go ahead.

MUD-CONQUERING CAR

Nebraskan Drives a Winton Through 75 Miles of
Treacle—A Suggestive Sign.

A "sign of the times" that is becoming less of a rarity every day is told by the accompanying illustration. The vehicle in the foreground is a Winton touring car, owned by C. E. Wilkens, of Omaha, Neb., as it appeared at the finish of a recent 75 mile run through deep mud. The old order is represented by the decaying carriage shop in the rear, with its flaring sign telling of the passing of the horse-drawn vehicle to make room for a stock of self-propelled ones.

The run referred to was made under exceedingly unfavorable circumstances. Throughout the entire 75 miles deep mud was encountered, through which the engine ploughed without let-up or falter. After it was over Mr. Wilkins declared that he did not believe that any other car in the world would have stood the test.

President's Pitiful Pre-eminence.

On last Wednesday night President W. E. Scarritt of the Automobile Club of America lectured before the Young Men's Christian Association, in New York, on the automobile as a factor in modern civilization. Among other things, Mr. Scarritt said:

"It is a strange fact, and a pitiful one, that ours is the only civilized nation on the globe that does not assist in building good roads.

"Every civilized ruler of a great nation, with one exception, is devoted to the sport. The exception is President Roosevelt, and he is too good a sport to long withstand the temptation."

Decoration Day (May 30) has been fixed upon as the date on which races will be held at the Fair Grounds, Indianapolis, Ind.

Alarm Bell for Tires.

Many motorists find a difficulty in ascertaining if their tires are at the proper degree of inflation when running. The driver of experience can tell by the feel of the steering, and many other little peculiarities of the car, when a tire has become dangerously soft; but the need for a more positive method of warning has long been felt. A French engineer has now hit upon a very simple device to serve as a notifier of tire trouble.

Bicycle dealers generally keep what is known as a tire bell, and this consists of a bell in connection with a small rubber wheel. The apparatus is fixed by a clip to the front fork of the bicycle, and the rider, by pulling a string, can lower the little wheel so that it touches the front wheel of the cycle. It then revolves by the friction, and sets the bell ringing violently.

Now, by fitting the tire bell on the motor car so that the rubber wheel comes quite close to the side of the tire, it can be made to serve as an alarm. It must be so placed as not to touch the tire when fully inflated. When a tire gets soft, it bulges at the sides, and if the little rubber wheel is mounted in the proper position the sides of the tire will touch it and ring the bell, even when the deflation is comparatively slight; while in case of a considerable deflation, a very loud and persistent alarm will be given, so that the driver can pull up at once, and thus avoid injuring the tire by driving on it when it is not properly inflated.

Use Flat Seated Valves.

Most inlet and exhaust valves fitted to internal combustion motors have a mitre seating. In a French motor, the Chenard and Walcker, the valve seating is flat. The advantages claimed with this type of valve are that the gases pass in and out of the cylinder with less friction, and that a lift of say one-eighth of an inch of the flat valve allows of a larger area of opening than a corresponding lift on one with a mitre seat.

One advantage the flat seated has over the mitre seat is that the flat seat grinds down absolutely true and does not change. An ordinary valve seating after constant grinding-in becomes so much enlarged that a larger mushroom head to the valve becomes necessary after a time.

Testing Plant for Worcester "Tech."

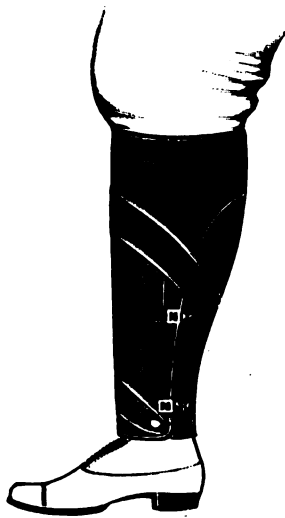
An automobile testing plant is being installed at the Worcester (Mass.) Polytechnic Institute by the mechanical engineering department. The plant is in the mechanical engineering laboratory, and consists of the rating machine, dynamometers, etc. When the plant is complete, automobiles of any design may be tested for efficiency, speed, etc.

The machines are placed on the rating machine and speeded fast or slow, as desired in the test, and the amount of work done by the gasoline considered. The machines may be tested for speed, hill climbing, and the efficiency of the engines.

Owing to the increased usage of automobiles, many of the graduates of the institute have been called on to do much work on these lines, and the plant is installed to give the students practical work.

Miller's two New Things.

Two new articles that are being marketed by the enterprising Chas. E. Miller, 97 Reade street, New York City, are the Gilbert automobile leggings, and the Gilbert grease



bag. Widely different as they are, they each fill a motorist's want.

The grease bags are designed to be filled with Albany grease and strapped over the steering connections, knuckle joints or connections. They protect these bearings from grit and water, and when filled with lubri-



cant keep the bearing clean and well lubricated for the entire season without further attention.

The leggings are specially designed for the use of motorists, and fit and look as well as high priced leather leggings, while being much lighter and fully as durable.

Showing Value of Military Autos.

Interesting experiments have been carried out by the Belgian military authorities in regard to the practical value of an automobile artillery department. Arrangements were made for conveying a battery of guns, with the necessary ammunition and artillerymen, to a particular point, the men and officers being transported in ordinary automobiles and the guns and ammunition in "Pipe" lorries. The whole battery of artillery, men, officers and ammunition, was retransported back to Brussels after a series of evolutions in the field, and the general opinion appears to have been that the operations were most satisfactory.

Remedies for Leaky Plugs.

Sparking plugs with loose and leaky centres are by no means uncommon, but, treating the matter generally, very few people try to discern and remedy the cause of the trouble. More often than not the source of breakage can be traced to the festoons of heavily insulated wire pendant from the plug terminals, or, where a neater and collective arrangement is employed, to the tighter wires from the overhead stay to the plugs which transmit the vibration to a considerable extent, resulting in a breakage.

There are two methods by which this transmitted vibration can be entirely obviated and the life of the plug increased considerably. The one is to solder a fine coil of iron or other wire to the end of the high tension cable, support the cable firmly and connect up the remaining end of the coil to the plug terminal. In this manner the weight of the cable is taken completely from the plug, and the fine coil is quite incapable of transmitting the vibration. A similar arrangement consisted of a series of brackets for holding the high tension cables clipped to the water circulation pipes, being insulated from them by means of sheet mica packing. From each high tension terminal to the plug end ran a very light silver chain, similar to a keeper chain on a lady's bracelet, and down this chain the current ran to the plug, having a minute spark gap, as a rule, between each link.

Siam a Field for Electrics.

Writing from Siam, an American motorist says that his Pope-Waverly electric car arrived there recently and is a source of wonder for the natives.

"The place here is suitable for such cars," said he, "as the distances are not great. There are no steep gradients, and electric current is always available. My car has been in operation about a month and has worked very satisfactorily. I am bringing my car to the notice of the King and Princes and am quite sure that they will enter the field of motordom just as soon as they have taken a few rides.

"Although there is a large electric lighting and power plant here, the engineers are not very familiar with the proper handling of accumulators and I have fixed up a dynamo especially for my purpose."

Frenchmen Tackle Chauffeur Question.

The management of the Association Generale Automobile have been tackling the difficult question of providing a supply of competent drivers, or, perhaps, it would be more correct to say, are taking steps to ensure employers being able to ascertain whether drivers who offer themselves for a post are competent men or not. A special committee has been formed under the presidency of Prince d'Arenberg, who has obtained the co-operation of a number of highly experienced fellow automobilists to arrange a programme of examination, on passing which the drivers will be entitled to the efficiency certificate of the association.

The Week's Patents.

757,390. Power installation for self-propelled vehicles. William O. Worth and John D. Worth, Chicago, Ill. Filed January 23, 1904. Serial No. 190,352. (No model.)

Claim.—1. In a self-propelled vehicle, the combination of a frame, two independent axles mounted for rotation in said frame, traction wheels carried by said axles, two primary sources of power mounted in longitudinal alignment at opposite ends of said frame, a driving shaft independent of both engine shafts mounted between said engines in alignment therewith, clutch devices for independently connecting either engine shaft with the driving shaft, two driving disks mounted on said driving shaft intermediate its ends, two driven shafts arranged transversely to said driving shaft, bearing slides supported from said shafts and carrying the inner ends of said driven shaft, mounted to move longitudinally relative to the driving shaft, means for simultaneously moving said bearing slides in opposite directions, driven wheels slidably mounted on said driven shafts, means for sliding said driven wheels upon their respective shafts, and a driving connection between the opposite shafts and one of the axles, and a connection between the opposite shaft and the opposite axle.

757,379. Frictional power transmitting device. William O. Worth and John D. Worth, Chicago, Ill. Filed December 30, 1903. Serial No. 187,097. (No model.)

Claim.—1. In a frictional power transmitting device, a driving shaft, two confronting driving disks thereon, two driven shafts disposed transversely to the driving shaft, a driven wheel carried by each of said driven shafts, means for moving said driven shafts transversely in opposite directions to bring the opposite driven wheels into contact with the opposite driving disks.

757,762. Drive chain. Everett F. Morse, Trumansburg, N. Y., assignor to Morse Chain Company, Trumansburg, N. Y. Filed Sept. 26, 1901. Serial No. 76,616. (No model.)

Claim.—1. A drive chain having its links composed of a plurality of plates, the plates of each link being interspersed upon the pintles with the plates of the adjacent links, and pintles formed in separate parts, of which one part engages with the plates of one link only and bears upon the other part of the pintle.

757,476. Vehicle running gear. Charles P. Malcolm, Owosso, Mich. Filed April 18, 1903. Serial No. 153,232. (No model.)

Claim.—1. In a motor vehicle running gear, the combination of the driving axle and the vehicle body and engine supported on springs each entirely independent of the other, an engine supporting frame pivoted at one end on the driving axle and at its other end spring supported from the other axle, the engine having a shaft extended rearward, and a balance wheel on said shaft forward of the front spring, a pivotal support for the rear end of said shaft and a universal joint in said shaft between said pivotal support and the balance wheel.

757,480. Band or strap brake. Peter C. Middleton and William S. H. Smith, Croydon, England. Filed May 8, 1903. Serial No. 156,284. (No model.)

Claim.—1. A band brake, to act in either direction independent upon the direction of rotation of the brake drum, consisting of a pair of levers pivotally fixed and connected to the crossed ends of the brake band; a fixed stop located between said levers adapted to limit their motion toward one another, and alternative means for transmitting the motion of the operating lever to one or the other of said levers, as set forth.

757,523. Induction coil. Richard Varley, Providence, R. I., assignor to Varley Duplex Magnet Company, a Corporation of New Jersey. Filed December 14, 1903. Serial No. 185,027. (No model.)

Claim.—In an induction coil, the combination of a secondary winding divided into sections and a single concentric sleeve or cylinder of insulating material surrounding a plurality of sections of said winding and having an inwardly projecting flange extending between two adjacent sections of said secondary winding.

757,524. Induction coil. Richard Varley, Providence, R. I., assignor to Varley Duplex Magnet Company, a corporation of New Jersey. Filed Dec. 30, 1903. Serial No. 187,200. (No model.)

Claim.—1. In an induction coil, the combination with a casing head provided with an opening of a core and primary coil wound thereon, said core and coil being removable through the opening in the casing head.

757,525. Induction coil. Richard Varley, Providence, R. I., assignor to Varley Duplex Magnet Company, a corporation of New Jer-

sey. Filed Jan. 12, 1904. Serial No. 188,005. (No model.)

Claim.—The combination of a plurality of induction coils, a plurality of armature levers corresponding respectively thereto and a single circuit controlling lever common to all of said armature levers and adapted to be actuated successively thereby.

757,527. Vibrator for induction coils. Richard Varley, Providence, R. I., assignor to Varley Duplex Magnet Company, a Corporation of New Jersey. Filed Jan. 20, 1904. Serial No. 189,826. (No model.)

Claim.—1. The combination of a pair of electrical contacts, one of which is a screw and a tipping bar carrying said screw, substantially as described.

2. Two contact points having a normal relative movement into and out of contact with each other, in combination with means for swinging one contact out of the path of the other and into position for inspection.

757,533. Motor car. Walter G. Wilson, Westminster, England. Filed Dec. 3, 1900. Serial No. 38,484. (No model.)

Claim.—1. In a motor car, the combination with the car body, of a motor and shaft and a motor supporting frame movable transversely and longitudinally to said car body and also about the axis of motion of the shaft, substantially as set forth.

757,636. Fly wheel for quick running internal combustion engines. Fritz Reichenbach, Charlottenburg, Germany. Filed June 19, 1903. Serial No. 162,274. (No model.)

Claim.—1. In a quick running internal combustion engine, the combination with the engine shaft and the means for rotating it, of a flywheel, consisting of non-magnetic material; a magnet fixed to said flywheel and adapted to form the tire of the same; a stationary armature adapted to be excited by the poles of said magnet; a bobbin surrounding said armature, and means for utilizing the currents generated in said bobbin for igniting the explosive mixture required for driving the said flywheel with its magnet, as set forth.

757,715. Propulsion of electric automobiles. Jonas W. Aylsworth, East Orange, N. J. Filed June 24, 1903. Serial No. 162,973. (No model.)

Claim.—E. In apparatus of the class described, the combination of an electric motor



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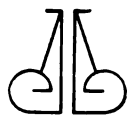
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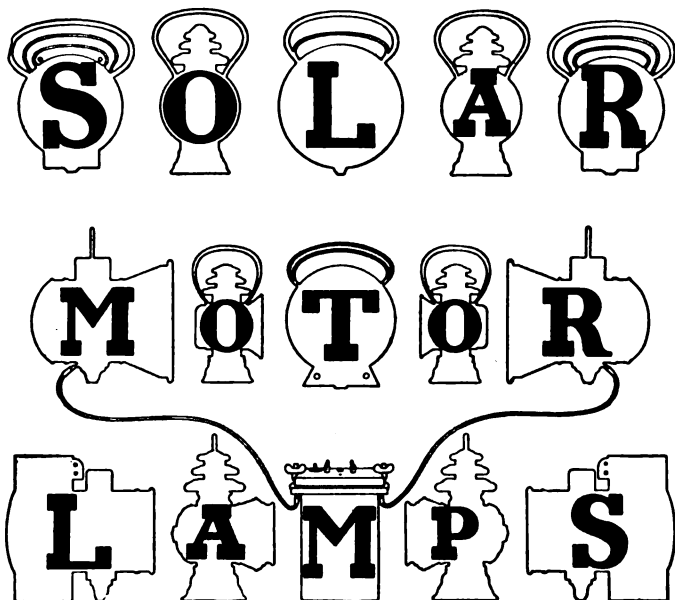
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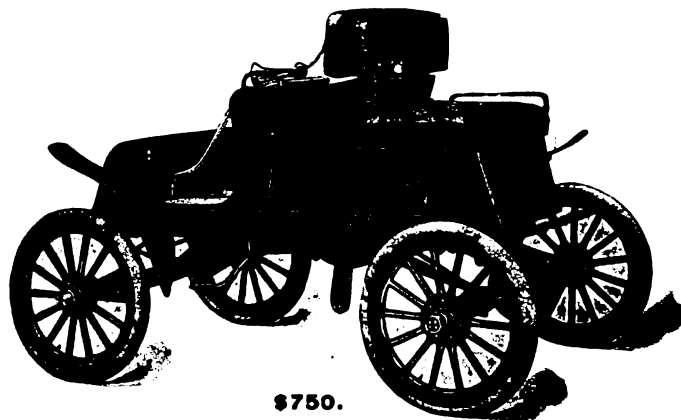
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having a rotatable armature part and a rotatable field part, means for normally locking one of said parts from rotation, a pair of driven wheels, connections between the two rotatable motor parts and said wheels, and a releasable clutch in the connection from the normally stationary member, substantially as and for the purposes set forth.

757,718. Process of making storage battery plates. Joseph Bijur, New York, N. Y. Filed Feb. 10, 1903. Serial No. 142,748. (No model.)

Claim—1. The process substantially as herein described of making openwork plates for storage batteries and the like from individual elements having interstices, which consists in first filling the interstices of the individual elements with a soluble material to prevent said interstices from becoming filled with molten metal, assembling the elements in the desired arrangement with channels or spaces between them, pouring said channels or spaces with molten metal to embrace the elements to form the completed structure, and then removing the filling material from the interstices of the elements to leave the finished openwork plate.

757,719. Apparatus for casting battery plates. Joseph Bijur, New York, N. Y. Filed Feb. 10, 1903. Serial No. 142,749. (No model.)

Claim—1. As an improved article of manufacture, a slat or crosspiece adapted to form an integral part of a cast plate or other structure, said slat comprising a body portion, having removable core pieces embedded therein at intervals, and provided with apertures between the core pieces and at the ends of said body portion, for substantially the purposes set forth.

757,751. Mechanism for transmitting and controlling power and motion. William H. Kessler, Passaic, N. J. Filed Nov. 1, 1902. Renewed Oct. 2, 1903. Serial No. 175,481 (No model.)

Claim—1. The combination with two oppositely arranged taper pulleys of corresponding shape and proportions placed in reversed relation with each other, and a belt extended from one to the other of said pulleys and laterally movable along their length, of a belt shifter arranged over the belt and parallel therewith, a nut fast to said shifter, a slidable screw parallel with the axes of the pulleys and working through the nut, means for rotating the screw to operate the nut and means for sliding the screw regardless of the rotation thereof, as and for the purpose set forth.

757,792. Circuit controller for induction coils. Richard Varley, Providence, R. I., assignor to Varley Duplex Magnet Company, a Corporation of New-Jersey. Filed Jan. 20, 1904. Serial No. 189,825. (No model.)

Claim—1. The combination with an induction coil, of a vibratory circuit controller having a plurality of sets of contacts and means whereby any one set can be thrown into operative position and the other set or

sets thrown out of operative position, substantially as described.

757,808. Steam propelled vehicle. Henry K. Hess, Philadelphia, Pa. Filed Dec. 21, 1901. Serial No. 86,742. (No model.)

Claim—In a steam propelled vehicle, the combination with an engine and a steam boiler mounted on the vehicle, an air blast device connected to and actuated by the engine, a steam cylinder connected to the boiler and receiving steam therefrom, a piston in the cylinder actuated in one direction by the steam pressure, a spring for returning the piston, an air chamber connected to and receiving air from the air blast device and provided with an exhaust port communicating with the combustion chamber of the boiler, and a valve in the air chamber operatively connected to and actuated by the piston and movable across the exhaust port to close and open the port as the steam pressure in the cylinder raises and lowers.

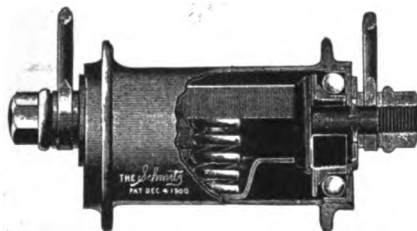
757,815. Apparatus for controlling the speed of motor car engines. Arthur Krebs, Paris, France, assignor to Societe Anonyme des Anciens Etablissements Panhard et Levassor, Paris, France. Filed May 8, 1903. Serial No. 156,314. (No model.)

Claim—1. An apparatus for controlling the speed of motor car engines, comprising a steering wheel, a shaft extending transversely of said wheel, means rotatably mounted on said shaft and means connected with said rotatable means and with the speed regulating means of the engine for controlling the speed of the engine when said first means is rotated.

757,940. Vehicle brake. Hiram P. Maxim, Pittsburg, Pa. Filed June 13, 1903. Serial No. 161,250. (No model.)

Claim—1. In a motor vehicle brake, the combination with the vehicle wheel and body of a motor suspended from the body by a hinge connection, gearing between said motor and the wheel, means for holding said motor an approximately uniform distance from the wheel axis, a brake rim or drum rotating with said wheel, an expanding ring arranged to engage said drum, means for expanding said ring, and an anchor for said ring supported from the motor.

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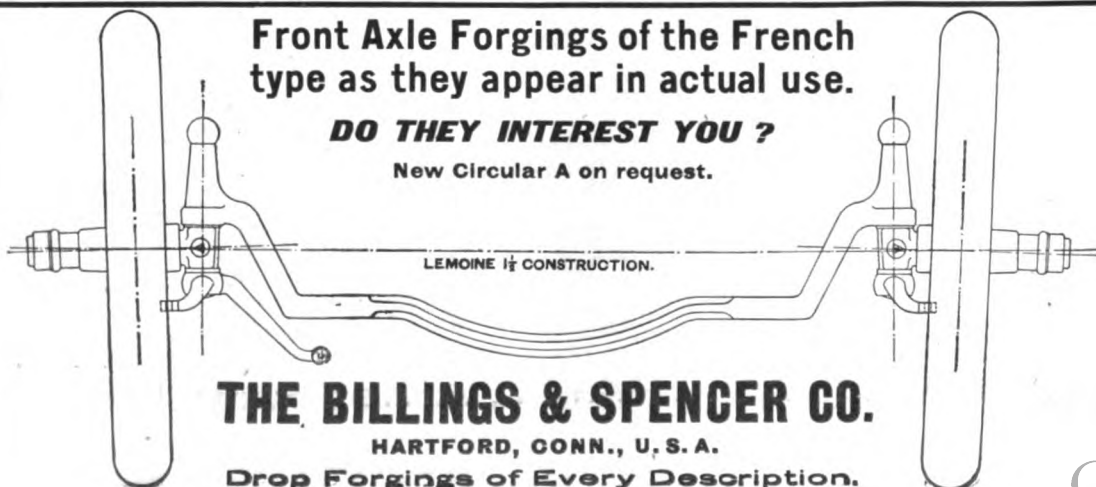
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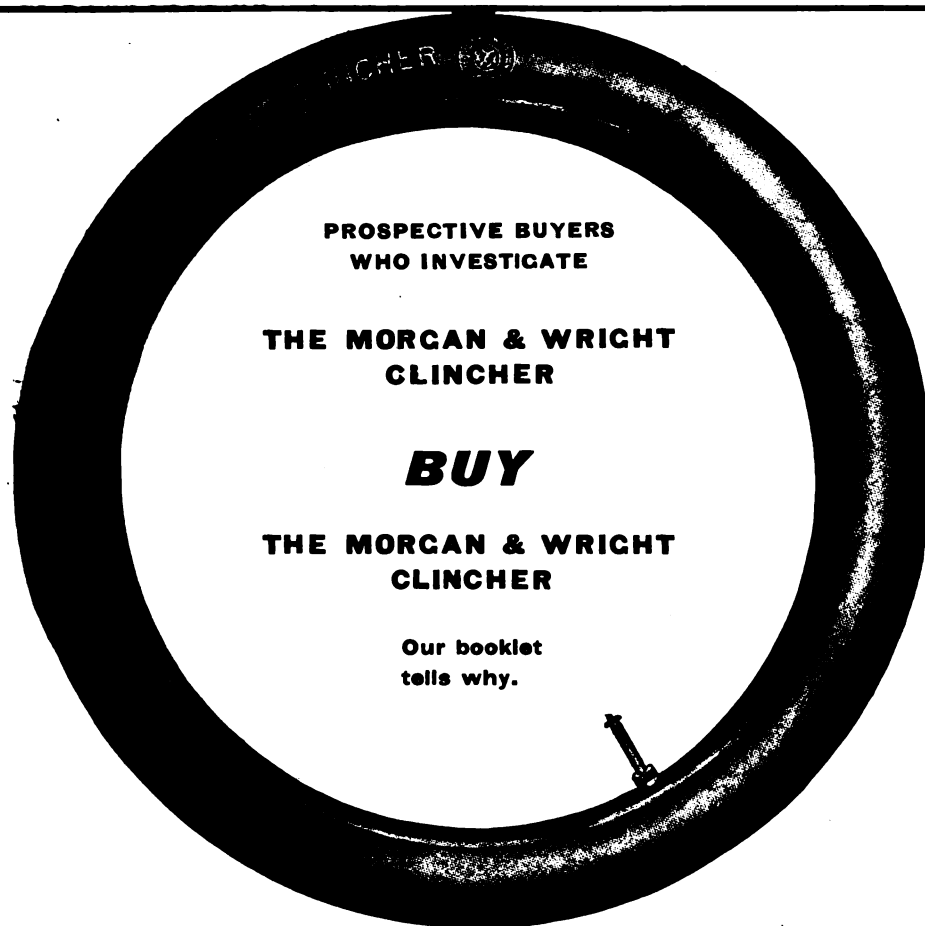
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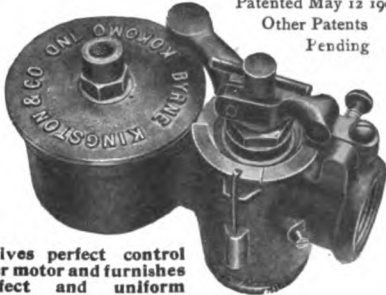
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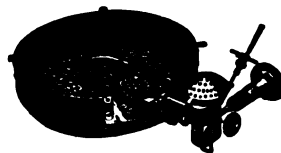
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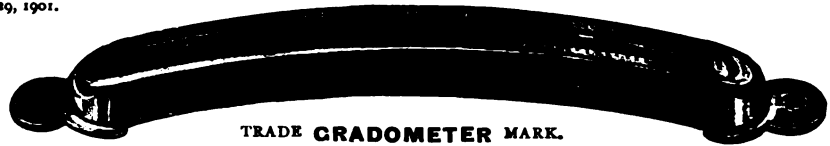
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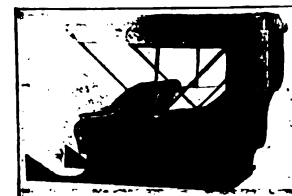
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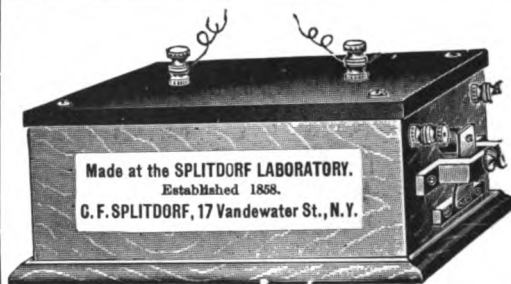
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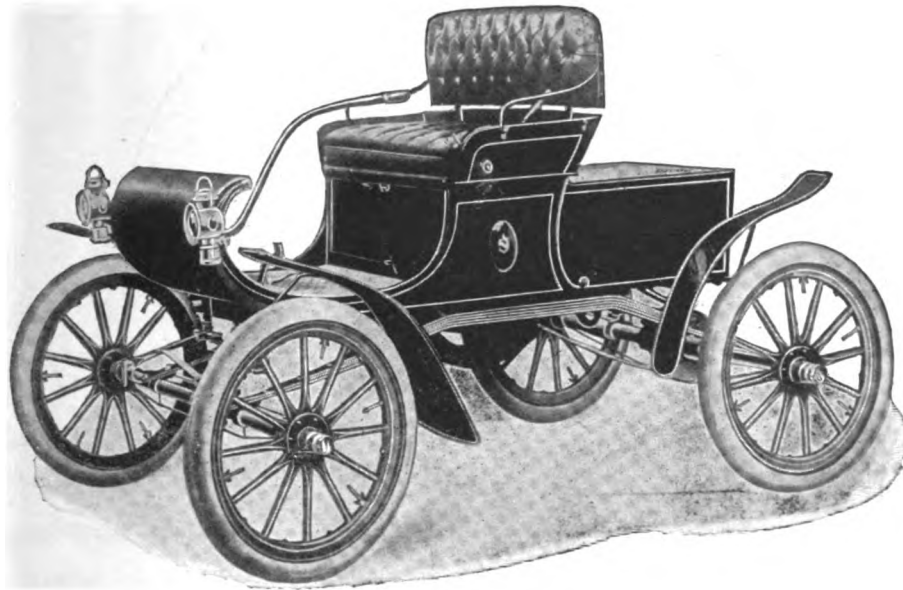
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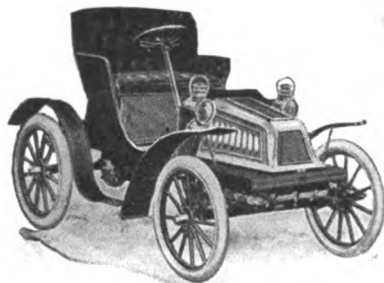
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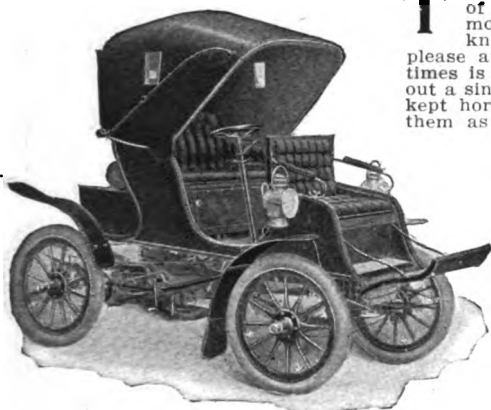
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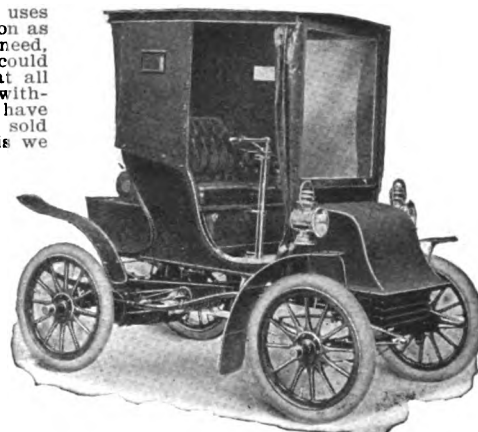
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Folding Front Seat and Full Victoria Top

THE Stanhope Models are peculiarly adapted to the uses of the medical profession. Selecting that profession as most exacting, we have carefully studied its need, knowing if we could please the physicians we could please anyone. The ability of an automobile to run at all times is the first factor. This has been demonstrated without a single doubt, and those physicians who at first have kept horses to supplement the automobile have since sold them as needless. The second factor is expense. This we are able to demonstrate is not to exceed the keep of one horse, with further economy of a driver when kept in garage. The work of our Stanhope is the equivalent of three horses, and many physicians tell us that the automobile has created for them two hours daily which they never had before. In conclusion we are permitted to quote the following extract from a letter written us by a prominent Southern physician who has used our Stanhope Model during the past eight months: "As regards my Stanhope, it is, in my opinion, as near the ideal as any carriage will get to be in the next ten years. For beauty of line, it is without equal. For power, it is ample. For simplicity, ideal. On the subject of motor, permit me to congratulate you on the New Pierce. You have gone one better than your model, and as that was the best, you have done well, indeed."



Coupe Top, Glass Front, Fully Enclosed

THIS MODEL WAS THE ONLY SMALL AUTOMOBILE AWARDED A GOLD MEDAL, ENDURANCE TEST, OCTOBER, 1903

The George N. Pierce Co., Buffalo, N. Y.

Member of Association of Licensed Automobile Mfgs.

ALSO MAKERS OF PIERCE CYCLES, ARROW AND GREAT ARROW MOTOR CARS

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DOWLING & MAGUIRE, Boston, Mass.
R. V. CONNERAT, Savannah, Ga.
MOBILE CARRIAGE CO., San Francisco, Los
Angeles.

CHICAGO AUTO. REPOSITORY CO., Chicago.
WESTERN AUTOMOBILE CO., St. Louis, Mo.
WILSON & CO., Ottawa, Ont.
R. W. WHIPPLE, Binghamton, N. Y.
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MILLER-MUNDY MOTOR CAR CO., Utica, N. Y.
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HARRIS & WILSON, Niagara Falls, N. Y.
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Publications Fully Describing all Products Sent on Application, or Can be Obtained from Above Dealers

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DISTINCTIVE QUALITY CLASSIFICATION
THE HIGHEST TYPE OF ELECTRIC CARRIAGES

FORCIBLE FEATURES OF EFFICIENCY

THE BAKER RACER THE KID

Established the world records for electrics, at Ormond Beach, Fla.—one mile, 60 3-5 seconds.

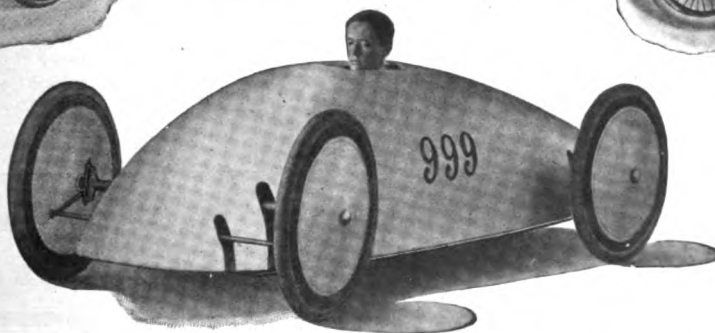
This Racer had a 3-4 h. p. motor and 12 cells of battery of same size and weight as used in our Runabout.



THE IMPERIAL

Same motor, same size battery (12 cells) as used in the Racer.

The efficiency is just the same as the Racer, only differently applied.



THE STANHOPE

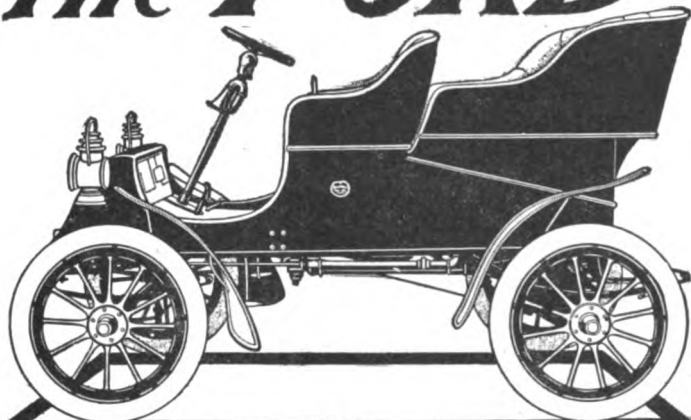
Same motor, same size battery (12 cells) as used in the Racer.

The efficiency is just the same as the Racer, only differently applied.

The Bakers are the Best Made, Best Finished, Most Efficient of all Electric Carriages

THE BAKER MOTOR VEHICLE COMPANY, CLEVELAND, OHIO

The FORD



Our claim for the superiority of the Ford double opposed motor over the single cylinder is substantiated by the fact that without an exception all the \$2,000.00 to \$5,000.00 cars have two or more cylinders.

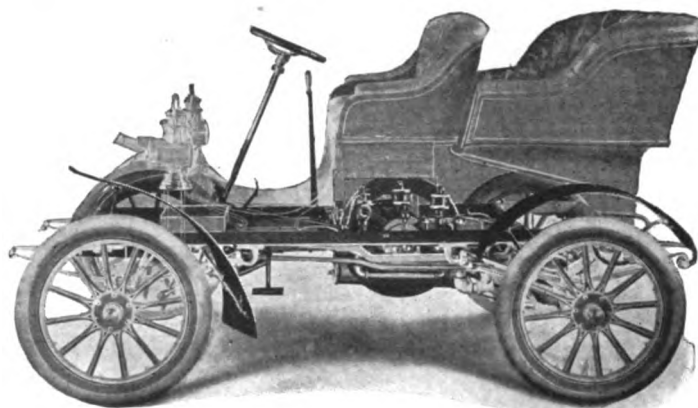
The Ford gives greater satisfaction and equals in speed, reliability and comfort any car sold at less than \$2000.00.

Price with Tonneau, \$900.00.

We agree to assume all responsibility in any action the Trust may take regarding alleged infringement of the Selden Patent to prevent you from buying the Ford—"The Car of Satisfaction."

Write for illustrated catalogue and name of our nearest agent,
FORD MOTOR CO., Detroit, Mich

THE ELMORE



How would you climb a hill? Would you try to go up in jumps or in short, regular steps? A four cycle engine goes in jumps. A two cycle in short, powerful steps. That's one difference between the four cycle and the special design, two cycle engine of the Elmore. In appearance, the Elmore is equaled only by the very best of the high priced cars. It is a rare combination of the Beauty and Luxuriousness of the big touring cars. Efficiency that can be relied upon and Price of an ordinary runabout. The Elmore is different. You ought to know about it. Our dealers report general satisfaction with, and admiration for, the little touring car that is so beautiful. Our catalogue should be on your desk. We would also like to send you the unique booklet "One Long Jump and Two Short Steps." It tells the whole story of the Elmore motor, and why it is "the nearest thing to a steam engine in the vapor engine world."

THE ELMORE MFG. CO.,
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**The Car You Ought to Have at the
Price You Ought to Pay.**



MITCHELL

**Bristling with Original and
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Are you posted regarding them?

MITCHELL MOTOR CAR CO.,

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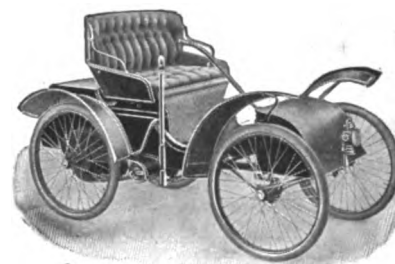
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Air cooled motor—nothing to
freeze.
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New tires very cheap compared
to larger cars.
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plenty of room.



Easy to learn to handle.
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Cheaper than horses.
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Perfectly practical on ordinary
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Frequently called "a beauty."
Made of the best materials.
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The following Manufacturers and Importers are licensed under the pioneer patent Number 549,160, granted to George B. Selden, dated November 5th, 1895, on

Gasolene Automobiles.

In view of their license agreement they and their agents will not sell, keep on hand or in any manner dispose of or deal in directly or indirectly any unlicensed new or second-hand gasolene vehicles, infringing said Selden patent.

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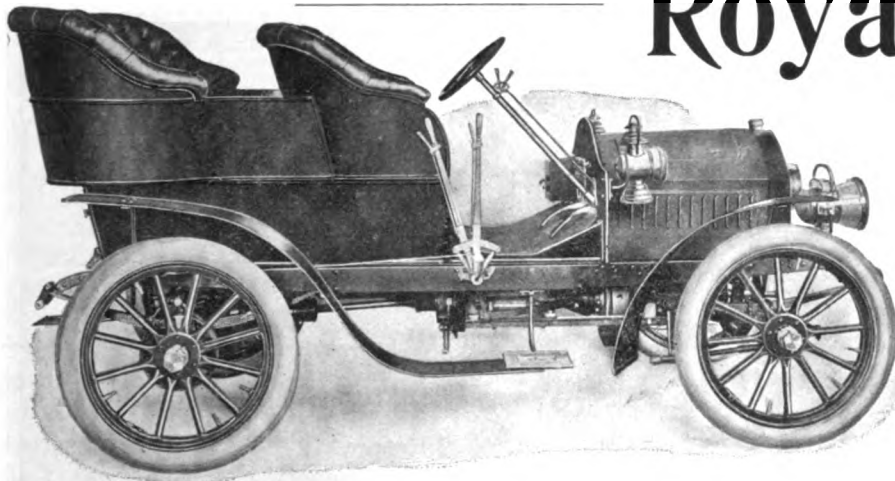
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Both the basic Selden patent and more than 400 other patents owned by members of this Association will be enforced against infringers. Manufacturers, Importers, Dealers and Agents, also Users of unlicensed machines are liable.

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Royal Tourist



Direct
Drive
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Model "O" 16-18 H. P., \$2300.00
to
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Beauty
and
Efficiency.



Power,
Strength,
Simplicity.

A FRONT RANK TOURING CAR—THE "FLYER."

SEE IT AT YOUR THOMAS AGENCY, OR WRITE FOR CATALOGUE.

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Locomobile Gasolene Car

BREAKS RECORD FROM NEW YORK TO BOSTON.

R. A. Greene, driving his 16 H. P. Locomobile Gasolene Car, broke the record from New York to Boston on Friday, May 13.

Actual running time—8 h., 57 min. Best previous time—9 h., 57 min.

Send for catalogue of our swift and reliable cars. We can make prompt delivery, owing to unequalled facilities for manufacturing, and because our car is not an experiment.

The Locomobile Company of America, Bridgeport, Conn.

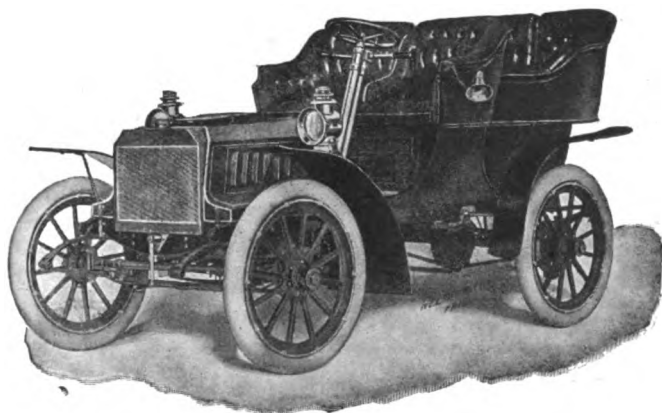
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FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — **\$1,700** at the factory.

Two cylinder, horizontal, opposed motor in front.
Ball bearing transmission/gear.
Wheel or lever steerer.
Divided front seat.

Automatic oiling of engine and other parts.
Gear drive.
Every part instantly accessible.

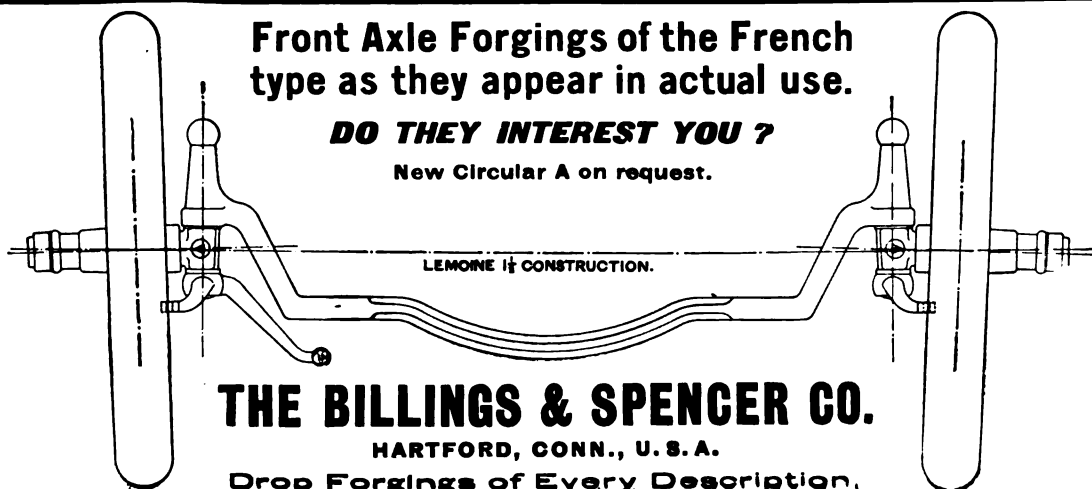
THE AUTOCAR COMPANY,

Ardmore, Pa.

BOOKLET.

Member of the Association of Licensed Automobile Manufacturers.

We have
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Forgings
in Stock
and can ship
promptly.



Front Axle Forgings of the French type as they appear in actual use.

DO THEY INTEREST YOU ?

New Circular A on request.

THE BILLINGS & SPENCER CO.

HARTFORD, CONN., U. S. A.

Drop Forgings of Every Description.

These
Forgings
are built for
Touring Cars
from
12 to 30 H.P.

OVER 2100 CADILLAC TRANSMISSIONS

in daily use, and not one worn out or broken. If some makers of automobiles had a record like that for their transmission, they'd "holler" loud and long, and they ought to. When we think of all the good points of a Cadillac and the few times we have told about them, we are almost ashamed of ourselves; but, after all, what was the use. We could not make enough Cadillacs when people wanted them to supply all.

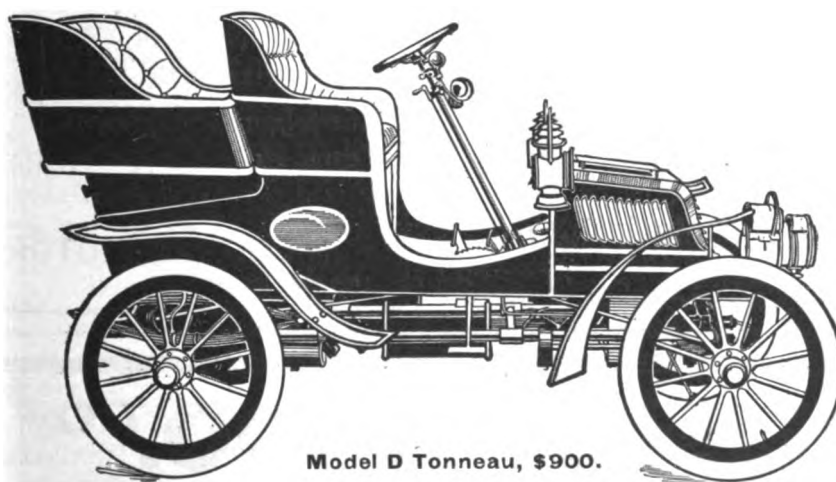
This planetary transmission of ours is a fool proof proposition. That's what it ought to be. It is unique in its construction, but positive in its action. There is no other change speed gear like it. It has an unequalled and unapproached record. It is compact and noiseless, apparently everlasting. To do with some transmissions what we've seen done with ours, would put them out of business too quick. When driving on high speed this 42 pound mass of forged gears acts as a balance to our 125 pound flywheel. The combination works well—vibration is reduced to a minimum. The gears run in oil, which is poured through but *one* hole. Each oiling is good for 200 to 500 miles. If any one tells you that they have a better transmission (or even as good) just look it up. If they have all they claim you will never have *any* trouble. If you should happen to get a car with a poor transmission, you might as well not have any. Besides a weak and flimsy transmission is an expensive affair. Look up the Cadillac transmission. It is another of those well made articles while the Leland & Faulconer Mfg. Co. know so well how to build.

CADILLAC AUTOMOBILE COMPANY, DETROIT, MICHIGAN.

Members of the Association of Licensed Automobile Manufacturers.

3 New Factories in 3 Months Means Early and PROMPT DELIVERIES

*Air Cooled.
Shaft Drive.
No Vibration.
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Speed
2 to 30 miles.
Simplicity.
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Model D Tonneau, \$900.

*A car which
stands on
its own merits
and one that will
go anywhere
that the big
fellows will go.
Climbs a 14%
grade
on high speed.*

On October 1, 1903, we moved into our new "1000 Crest Factory." At the expiration of the New York Show we were so completely swamped with orders that we started night work, also an enormous addition to our factory, increasing our original capacity from 1000 to "1500 CRESTMOBILES." This, we thought, was sufficient; but the Fates decreed otherwise. "Crest Success" is universally recognized and Crest agents continue to send duplicate orders—as a result of which we have just completed our third addition, making the Crest Factory one of the largest in the world. For the BUYER, we have the simplest car made—FOR THE AGENT, A CAR THAT WILL SELL FROM JANUARY 1 TO DECEMBER 31.

Members of
Licensed Association.

CREST MFG. COMPANY, Cambridge, Mass.

Write for
New Catalogue.

The ELMORE—The Car of Simplicity

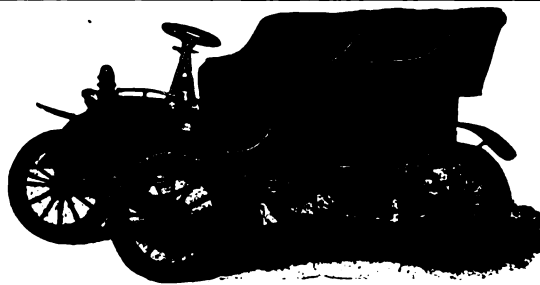
\$850.00

The more you learn about other automobiles costing less than \$1,500—the more you'll like the Elmore at \$850. The Elmore is exactly what it was designed to be—the simplest, most efficient, handsomest, most dependable, easiest riding light touring car on the market.

Let us mail you the 1904 catalogue and the unique booklet, "One Long Jump and Two Short Steps." Write today, please.

THE ELMORE MFG CO., 1104 Amanda Street, Clyde, Ohio.

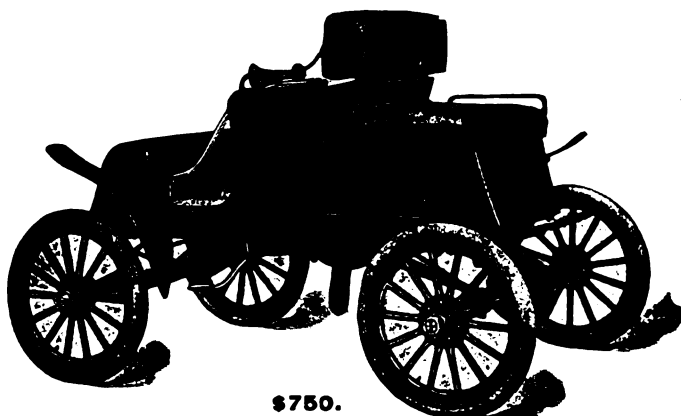
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NORTHERNS in New York

We are sole agents for New York,
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and can make

PROMPT DELIVERIES.



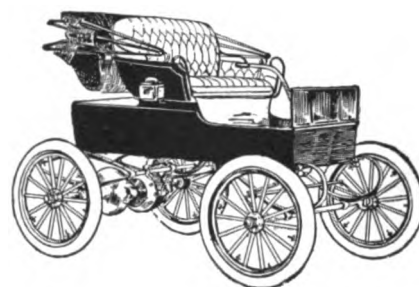
\$750.

You all know the Northern—if you do not, its grace, style simplicity and many exclusive features will impress and delight you. Inquiries and inspection invited.

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TELEPHONE, 4598-38th.

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Ample Battery.
Large Tires.
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Run-a-bouts, Stanhopes,
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GASOLINE.

Four Cylinders at price
of two.
Bevel gear at price of
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Pressed steel frame.
Double steering connec-
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Roomy Tonneau.
4 Cylinder, 3½ x 4, \$2000.
4 " 5 x 6, 3000.

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NATIONAL MOTOR VEHICLE CO.,

1400 East 22d Street,

INDIANAPOLIS, IND.

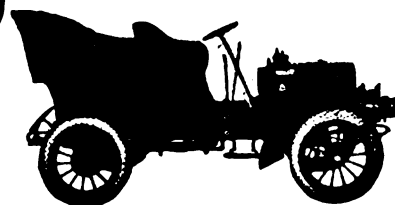
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The Yale is a beautifully finished, roomy, luxurious family car at a moderate price. It is a happy medium between the ponderous "all motor" racing car and the noisy but inefficient run-about. It will do all the work asked of it, do it easily and is dependable. A comparison of the Yale with the other cars exhibited at the National Shows goes to show that in the Yale you can offer more for the money than in any other car made.

Send for catalogue and at the first opportunity examine a Yale.

THE KIRK MFG. COMPANY, 950 Oakwood Ave., Toledo, Ohio.

Members of the Association of Licensed Automobile Manufacturers.



The Waterless Gasolene **KNOX**—Camel of the Desert

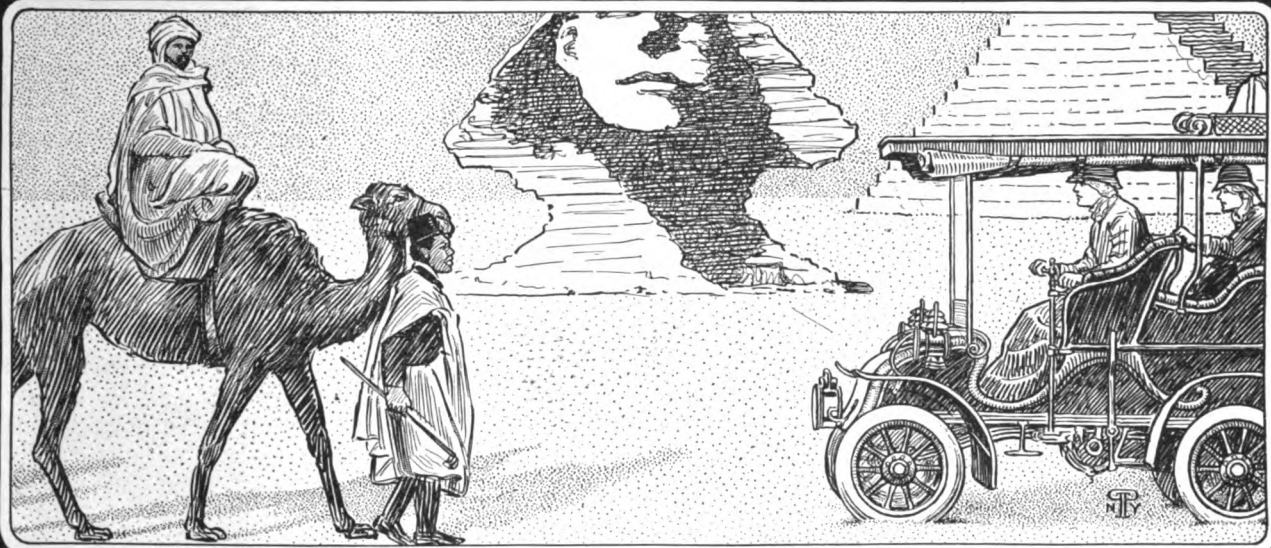
Because no water needed. Will not overheat even in the Sahara, because Knox has the only high power engine **successfully** and automatically cooled by air. The Knox patent corrugated pin cylinder and fan system is the only successful system of air-cooling. **What others attempt to do, the Knox does.** Better use a Knox and "Obviate the Tow."

SEND FOR OUR NEW CATALOGUE.

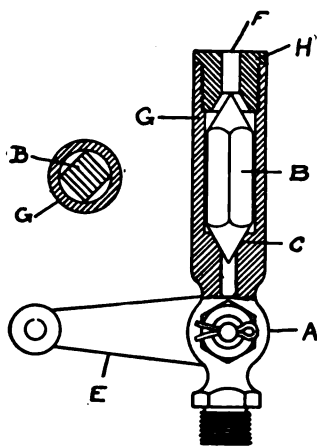
KNOX AUTOMOBILE COMPANY, Springfield, Mass.

Members of the Association of Licensed Automobile Manufacturers.

Selling Agencies in All Principal Cities.



No More Back Kicks.



Patent applied for.

Every one who has used an air-cooled motor knows how difficult it is to start such a motor when very hot without the compression igniting the charge and causing the disagreeable backward kick of the starting handle. We are pleased to announce that we have remedied this difficulty entirely with our Buckboard motors by means of our new safety starting valve, which will hereafter be fitted to all Orient Buckboards. The starting is now so easy that a child can operate it.

The principle of the valve is as follows: First.—During the drawing of the charge no air is admitted except through the carburetor, thus insuring a correct mixture. Second.—During the compression stroke all compression is released by a slight rising of the valve at the lower seat, C. Third.—When the explosion takes place, the valve closes instantly by being driven upward into its upper seat, thus saving any loss of power. Therefore, as the motor has no effort to make in compressing the next charge, it starts off freely. As there is no compression there is no chance of a preignition and back kick from a hot motor, hence the starting handle may be turned easily and rapidly until the motor starts. After the motor starts, the cock is shut off in the usual manner, so the compression may be utilized in propelling the car.

WALTHAM MFG. COMPANY,

Waltham, Mass.

Members of the Association of Licensed Automobile Manufacturers.

I stands for
In-com-pa-ra-ble,
Excellent beyond
comparison; unap-
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character or degree;
matchless in design
and workmanship.



There are automo-
biles and automobiles,
but the *White* is
incomparable, and
you don't have to wait
to get up steam.
100 Miles on one
filling of tanks.
Weight, 1600 lbs.

IMPERIAL WHEELS

The Kind You Want,
And Delivered When
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The Kind of Trade We
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Imperial Wheel Company

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The Wheel Makers of the World

Why ?

A great many people enquire why the
Darracq Motor Cars are so popular and
why so many more of these cars are
sold than any other foreign make.

The answer is

Because they are Reliable and sold at
the right commercial price.

F. A. LA ROCHE CO.,

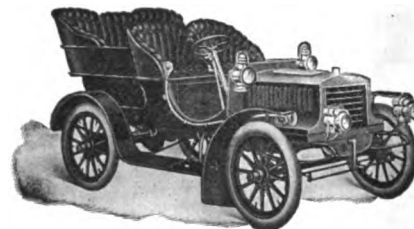
Sole American Agents,

655-654 Hudson St.,

147 West 38th St.,

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THE CHAINLESS



WOLVERINE.

A Live Proposition for Live Agents.

A few of Its Characteristics:

- Bevel gear drive with sliding gear transmission, 3 speeds ahead and reverse.
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- Long wheel base.
- Large high back tonneau.
- Finest leather upholstery.
- Space under tonneau floor to carry extra tire, rain covers, etc.
- Brakes positive and operated by foot.
- Wheels wooden of heavy artillery pattern and fitted with 30 x 3 1-2-in. Diamond Tires.
- Ignition by jump spark automatically controlled.
- Sight feed oiling device on dash, 500 miles on one oiling.
- Beautiful in appearance and handsomely finished.

PRICE, \$1750.

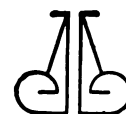
THE REID MFG. CO., Detroit, Mich., U. S. A.

HORACE E. DAY & CO., 60 West 43d St., New York, Agents.
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THE IRGENS AUTO. CO., 1111 Washington St., Oakland, Cal.,
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**Strong.
Resilient.
Durable.**



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

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New York. Detroit. Dayton.
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THE PIONEER TIRE

Experience counts in the making of automobile tires. We have been making G & J Clincher Tires for ten years, and know how to make tires that will give the best service. Use the genuine G & J tires and get the benefit of this experience. They are high grade, reliable tires.



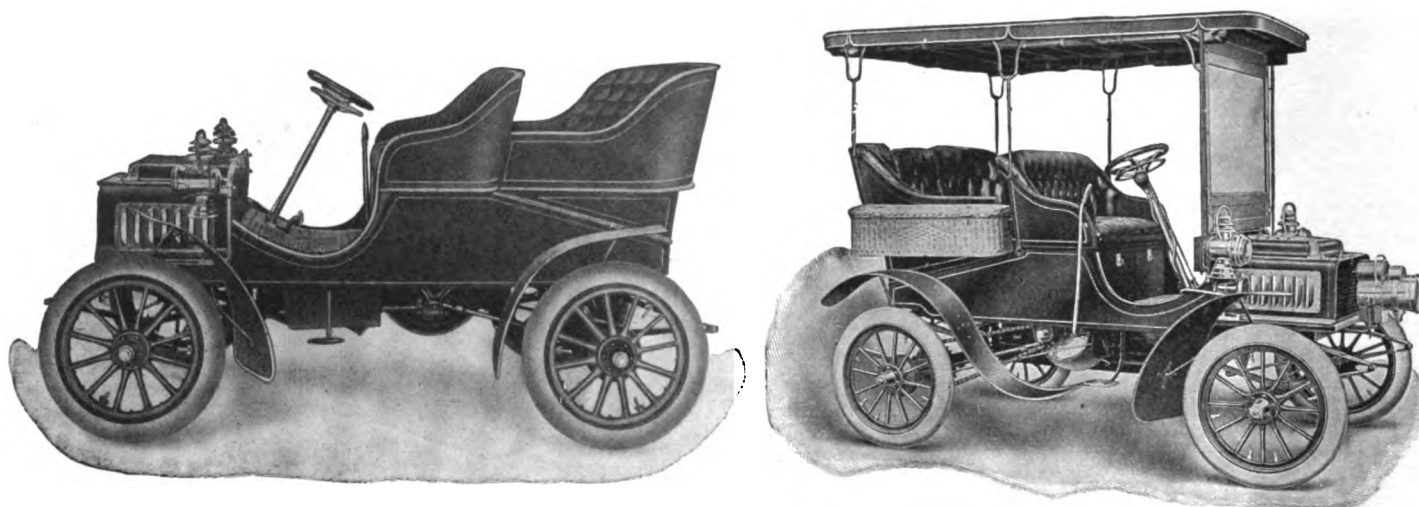
Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

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Main Office and Factory:
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Your Money's Worth

is what you get
when you purchase a

Rambler



\$650—\$1350.

THERE IS
NOTHING FICTITIOUS

about the price or any feature of
the car. You may pay twice as
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better value or better service.

THE RAMBLER LITERATURE IS AS INTERESTING AS IT IS INSTRUCTIVE. WANT IT?

THOMAS B. JEFFERY & CO., Main Offices and Works, **Kenosha, Wis.**

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York, U. S. A., Thursday, May 26, 1904.

No 9

FRENCH ANTI-SELDEN CLAIMS

Manufacturers Unearthing a Lot of Alleged Anticipatory Patents.

French manufacturers are reported to be busily at work preparing to contest suits brought against them, or likely to be brought, for infringement of the Selden patent. M. Jeantaud has been engaged to unearth old records of the French Patent Office having reference to clutches and changeable gears.

M. Jeantaud has recently indicated the lines of the French defence by publishing a letter giving instances of gears and clutches being in use long before the Selden patent was granted. He says that the report he presented in 1900 to the Automobile Club of France on the Lenoir car constructed in 1864 caused a good deal of uneasiness to the A. L. A. M., who sent a representative to Paris to procure a copy of the report. The object of this visit was to ascertain whether there was any reference in the Lenoir patent specification to gears and clutches.

M. Jeantaud informed the American representative that if no such reference was to be found in the patent, it was simply because Lenoir was perfectly aware that they had been in use on nearly all the mechanical carriages constructed during the last century, as was clear from the patent specifications and the design of the vehicles, and, in fact, it was difficult to imagine how a successful car could be built without them. He instanced particularly the Pecquer car in 1828, with transmission by gears and chains; the vehicle of Teray, of Nantes, in 1835, in which the two driving wheels could be clutched or thrown out at will; Payre, of St. Etienne, in 1849, whose car had chain transmission, and, presumably, therefore, a reducing gear; in 1856 and 1865 Lotz, of Nantes, built steam cars in which a variable speed was obtained by gearing; in 1865 Gelleret and Albaret took out a first patent for a steam car with chain transmission and two speeds, and also a clutch, which allowed of the engine being thrown out to drive agricultural machinery; in 1867 Cody patented a driving axle with differential gear; in 1875 Bonger pat-

ented a system of car with the road wheels loose on the axle and clutched for driving, and in 1877 Rosenwald had a vehicle propelled by a gas engine with a pinion on the counter shaft, from which the drive was taken through a series of gears to fixed and loose spur wheels, and thence by chains to the driving wheels.

All these patents were taken out in France. If the United States Patent Office affected to ignore what had been done in France, they could hardly, says M. Jeantaud, have been unacquainted with the invention of McKenzie, in England, in 1875. The McKenzie steam brougham was a thoroughly practical vehicle; the only thing which prevented its employment was the Road Locomotive act of 1878, and but for this it is very probable that the automobile movement would have developed in England in the same way as it did in France fifteen years later. The McKenzie carriage was propelled by a two cylinder vertical steam engine, of which the crank shaft geared on to the counter shaft, and this carried a sliding variable gear with two spur wheels, which were capable of being clutched on a shaft carrying a differential, on which shaft were two gears corresponding with the two spur wheels of the sliding gear. This patent was taken out in England in 1875, and possibly at the same time also in the United States.

M. Jeantaud therefore concludes that the Selden patent of 1879 is nothing but a crude copy of the McKenzie and Rosenwald patents of two and four years previously, and he does not think that the A. L. A. M. has a leg to stand upon.

Tire Makers Discuss Prices.

The makers of detachable tires were in conference in New York on Tuesday, the big men of practically all the big companies being present. It is known that the greatly increased price of rubber entered largely into their discussions, but so far as can be learned no increase in the price of tires is likely to result.

Merkel Will Make Automobiles.

The Merkel Manufacturing Company, Milwaukee, is making ready to bring out an automobile. Hitherto the concern has confined itself to motor bicycles.

ALLEGES BREACH OF WARRANTY

Thatcher Says Car was Unsatisfactory and Sues to Recover Amount of Check.

At Albany, N. Y., last week, Justice McCall and a jury, in the Supreme Court, listened to the evidence in an action brought by George H. Thatcher, of Albany, against William S. Howard, of Yonkers, formerly of Troy, to recover \$1,500 damages on a breach of warranty. The case is of importance by reason of its being the first in which the question of warranty has been fought out.

Howard is an automobile manufacturer, and on February 19, 1903, it is alleged, he made an agreement with Mr. Thatcher to build him an automobile for \$1,800 which he would warrant for one year. Mr. Thatcher gave Howard his check for \$1,800, and the machine was delivered on August 17, 1903. Mr. Thatcher alleged that he tried the machine, and found that it was poorly constructed, and alleges that the automobile was unsatisfactory in every respect. The parties were unable to adjust matters satisfactorily, and Mr. Thatcher began the action which came to trial as stated, and in which he asks for \$1,500.

Howard claims that he did not use the \$1,800 for one week after the delivery of the machine in August, as he had made an agreement not to do so. Subsequently, he alleges, he received word from Mr. Thatcher informing him that the machine was satisfactory in every respect, and he thereupon put the money in circulation.

Move Offices to New York.

The general offices of the India Rubber Co. have been removed from New Brunswick, N. J., to No. 16 Warren street, New York City. All correspondence should be addressed to and business transacted at the latter place.

A disastrous fire broke out in the warehouse of the Jonas Automobile Co., Milwaukee, Wis., on May 20. Fifteen automobiles and two buggies were destroyed, causing a loss of \$17,000. Of this \$14,000 is covered by insurance.

PROGRESS OF SELDEN SUITS

Testimony Being Taken Six Days a Week and Will Continue Without Summer Season.

As there has been considerable curiosity expressed by importers and others concerning what is being done with regard to the suits on the Selden patent brought against the Ford company, Duerr, Wanamaker, Charley, the Panhard company and others, a Motor World man instituted inquiries among the representatives of both sides in these suits, and learned that the cases are all progressing with unusual rapidity for patent litigation.

The taking of testimony in the cases of Ford, Duerr, Gude and Wanamaker has been in progress for seven weeks now, and the work has been going on practically six days a week. The principals and the lawyers on both sides are anxious to push the cases along as rapidly as possible, and no tactics of delay are being introduced. The court has given its consent to the expedition of matters by grouping the cases, so that testimony taken in behalf of the Ford case shall apply also to the suits against Duerr, Gude and Wanamaker. It is now expected that the taking of testimony will be continued through the summer, without recess, so anxious are both sides to settle the issue.

The suits against Charley and Panhard & Levassor are also progressing smoothly now, and the taking of testimony in these suits will soon begin. The answer made in the case against Charley caused some delay, because he denied having ever imported a car, and it was necessary for the plaintiffs to find and produce evidence that he had imported cars in his own name.

The fact that the suits against the Mercedes and Panhard importers are not so far advanced as the others is not cause for discontent on the part of licensed importers, according to those who should know, for as soon as the Ford case or any other is decided, the others will be practically terminated. If the Selden patent is sustained in the first case finished, that settles the question for importers and all alike, and the same is true if the patent is not sustained.

Summer Schedule of Meetings.

The June meeting of the executive committee of the National Association of Automobile Manufacturers will be held on June 1 at St. Louis, and on the next day the executive committee of the Association of Licensed Automobile Manufacturers will be held at the same place. The annual meeting of the A. L. A. M., as a whole, will be held at Niagara Falls about the middle of June. It will probably be a two days' session.

Ohio's Governor Buys a Peerless.

Oscar S. Lear, the well known Columbus (O.) dealer, has a feather in his cap. He succeeded in selling Governor Herrick of Ohio a fine new Peerless car, and the Governor, after an extended trial, is very much pleased with it.

The Week's Incorporations.

New York, N. Y.—Rensil Automobile Co., with \$1,000 capital. Directors—C. W. Lisner, H. L. Toplitz and H. J. Richardson, of New York.

Port Jervis, N. Y.—Port Jervis Automobile Co., with \$1,000 capital, to deal in automobiles. Incorporators: P. C. Rutan, F. B. Williams, John A. Rutan, Port Jervis.

Baltimore, Md.—The Mar-Del Mobile Co., with \$1,000 capital; to deal in automobiles. Incorporators—Robert J. W. Hamill, John H. Suter, Graham B. Hall, Frederick W. Mardies and Alexander Hamill.

Providence, R. I.—The Central Automobile Exchange, to manufacture and sell automobiles and parts. Officers—President, L. F. N. Baldwin; vice-president, B. L. Blackinton, and secretary and treasurer, Gilbert M. King.

Cleveland, Ohio.—Euclid Avenue Automobile Co., to manufacture and deal in automobiles. Incorporators: Wade McIlrath, E. V. K. Hopkins, Clyde Martin, Web A. McIlrath, Harry W. Orndorf, and Benson McIlrath.

Detroit, Mich.—The Sommer Motor Co., with \$40,000 capital. Half the capital stock has been paid in, \$5,000 being in cash and \$15,000 in the machinery, stock, etc., of the Hammer-Sommer Auto Carriage Co., Ltd. The incorporators are Herman A. Sommer, 1,997 shares; William J. Sommer, Arthur Schreiter and Alex. J. Reno, each one share.

Picard's Schedule of Liabilities.

Paul Picard, a Chicago motorist, who has been much in the public eye during the last year or two, has filed a petition in involuntary bankruptcy. His schedule filed consists principally of liabilities, the latter being placed at \$18,861, and assets at \$4,329. "One Renault Freres auto, mortgaged for \$7,500, value \$3,500," is an item among the assets. The petitioner asks to be allowed to retain certain household furniture as exempt.

The expenses of automobilism are told in the following items in Picard's petition under the head of liabilities: Motor Car Supply Co., motor supplies \$26.14; E. A. Ferguson, chattel mortgage on three autos and household furniture, \$8,500; L. Rubey, motor supplies, \$129; La Roche & Co., motor supplies, \$36; B. F. Goodrich Co., motor supplies, \$20.05; Studebaker Bros' Mfg. Co., repairs of auto, \$175; Ralph Temple & Austrian Co., motor barn, \$93; Winton Motor Carriage Co., repairs, \$29; Smith & Mabley, tires, \$12.50; Renault Freres, Paris, tires, \$200; Crowds Automobile Co., electric battery, \$15.

The bankrupt, who was formerly a member of the Chicago Automobile Club, was addicted to fast driving, and was almost continually in hot water with the police. His business was that of an insurance adjuster.

Two Cadillacs have been purchased by the Advance Thrasher Co., Fargo, N. D. They will be used by the concern's canvassers in covering their routes.

A MUCH TANGLED AFFAIR.

Suitor Levied on Car Sold by Dealer and Owner Had to Replevin It.

Rather a peculiar tangle was brought to light in consequence of litigation now being waged in the Omaha, Neb., courts, and it will take no small amount of cogitation and legal finesse to straighten it all out.

It appears that a short time ago one Bertie Aldrich, of Fairmount, near Omaha, purchased a Winton touring car from H. E. Fredrickson and left a deposit of \$500. Before it came to hand he changed his mind about it and went to Fredrickson to get his deposit back. Naturally that dealer could not see the matter in that light, and he held fast to his \$500. Thereupon Aldrich brought suit to recover.

Meanwhile S. Sleuman, of Omaha, purchased a car of another make from Fredrickson, and shortly had the misfortune to smash into a tree with it while driving in the vicinity of Fairmount. He left the car where it was, and sent word to Fredrickson to get it and have it repaired. Before this could be done, however Aldrich saw the machine, which bore the lettering "Made for H. E. Fredrickson, Omaha, Neb.," as do all the latter's cars.

Aldrich bled him straightway to Geneva, procured the necessary writs and things—and waited. This was on a Friday afternoon. Mr. Fredrickson didn't see fit to go after the Sleuman machine until Sunday, and Sunday it rained. But the necessary repairs were made and the auto was ready for the return trip Monday morning. But the sheriff found it and Fredrickson before the start, and served his papers, with the result that Mr. Fredrickson came back without Sleuman's car. It took so long to arrange things that Fredrickson didn't get back till late Monday night. But Tuesday morning Attorney Lysle I. Abbott was called to the telephone so early that he had to answer in his pajamas. Sleuman also was communicated with, but failed to see the joke. After some delay the latter's attorney got out a writ of replevin and the Sleuman automobile was brought in.

The lawsuit that is entailed between Fredrickson and Aldrich will be tried at Geneva in the near future.

Blaze at White Branch.

A slight fire occurred on Tuesday in the new salesrooms and garage of the White Sewing Machine Company, at 215 Forty-eighth street. Several firemen were overcome in the cellar, and there was considerable excitement for a time, but the stocks were rescued and no one was seriously hurt. There was about \$2,000 damage to the building.

An addition to the Orient family has been made. It is a Buckboard surrey, and the Waltham Company have just placed it on the market.

ARE AUTOMOBILISTS PARIAHS?

When Stoned Nearly to Death Police Refuse Aid Except Under Amazing Conditions.

Although the storming of automobiles by hoodlums who throw stones and sticks, tomato cans and dead cats has long been a common practice in various parts of New York City, the police could not be aroused to action until a case that looked like a murder was brought to their attention. Such a case occurred last Sunday, when the automobile of W. C. Gotshall was stormed in East 106th street, between First and Second avenues, and Mrs. Gotshall had her head so severely cut by a stone that for several days it was feared she would die.

The police idea that automobilists have not the same claims to protection as other citizens, but are only objects of prey, was illustrated when Mr. Gotshall appealed to a policeman to arrest the assailant, with the result that the "cop" smiled, twirled his club and remarked that the place where the assault occurred was off his beat, and he could not do anything.

The incident being brought to the attention of Police Commissioner McAdoo, that official announced a remarkable plan of action. He said that if the automobilists would give him the routes most used by them travelling to and from the ferries, he would have them especially patrolled on Saturdays, Sundays and holidays. In other words, the Police Commissioner of New York decided that he would protect automobilists from assault on certain days of the week, provided they travelled on certain streets specified by him. Concerning such an arrangement, the Sun remarks editorially:

"That is, an automobilist will have protection only in certain streets. In other thoroughfares he will be at his own risk, and the police will not accept responsibility if harm befalls him.

"Such a system is capable of indefinite expansion. Highway robbery might be prohibited in specific sections of the town. Thieves might be excluded rigorously from certain districts, and thus warned by implication that they must conduct their particular variety of depredations elsewhere. The city would be divided into zones, in each of which a particular law would be enforced rigidly. By confining the police activities to limited areas, and calling upon them to enforce only one law in each, their work would be lightened greatly."

The assault on Mrs. Gotshall has had the effect also of arousing the officials of the Long Island Automobile Club, and they have arranged to send out cars carrying detectives through certain districts where members have been stoned in the past with a view to apprehending the offenders.

Mayor Jackson of Rockford, Ill., will become a motorist. He has ordered a Waverley electric.

Police Get One Record-Breaker.

Three men made bold to flout the law against excessive speeding last week, and one of them reaped his reward by being gathered in and made to pass a few unpleasant minutes while arrangements were being made to bail him out. The other two got off scot free.

The men were, to take them in the order of their performances, Harry Fosdick, Winton, and C. A. F. Philzemayer and R. A. Greene, Locomobiles, and they were engaged in attacking the records between New York and Boston. Fosdick devoted himself to assaulting the westward record, and Philzemayer and Greene went East and West, respectively, each annexing a record. Owing to the double system of calculation, whereby the reckoning is made on both elapsed and running time and records for each claimed, confusion prevails. Reports agree as to Fosdick and Greene; but Philzemayer is credited with 8 hours and 42 minutes running time from New York to Boston, according to newspaper accounts, while the Locomobile Company gives the time as 8 hours and 15 minutes—a very material discrepancy.

Fosdick started from Boston at 12:35 a. m., Saturday, May 21, and reached Central Bridge, New York, 10 hours and 35 minutes later, his running time being 8 hours and 54 minutes, or three minutes better than Greene's time of May 13. Philzemayer immediately started from Central Bridge and reached Boston in 10 hours and 24 minutes, his running time being 8:15, according to the Locomobile Company, and 8:42 as the Boston newspaper men make it. At Boston R. A. Greene was in waiting, and he started for New York. At Westchester, Conn., near Bridgeport, he was arrested by a rural constable, who had been telephoned to by a fellow guardian through whose territory he had speeded. Bail being furnished by A. L. Riker, Greene proceeded, and reached New York in 8:50, running time.

Dietrich Occupies New Building.

O. H. Dietrich, the Allentown, Pa., dealer, has moved into a new building, which was erected especially for him. It is two stories high, 40x110 feet, with a front of Trenton pressed brick. The entire front on the first floor is in glass so passersby may view the machines displayed. On this floor the offices and showroom are in front in a space 40x40 feet, and at the rear of this is the storage room, 70x40 feet. The latter are filled with machines of the various makes sold by the company, and here is also the repair shop for disabled machines.

The second floor is divided into two parts, the front of which will be used for the exhibition of machines and bicycles. In this room seventy-five machines can be stored. At the rear the repair work is done.

On the first story there is an entrance direct to Tenth street. The entire first floor rear is cemented substantially so as to prevent dampness, and forty machines can be stored. The Cadillac is the leading car handled.

ONLY WANT \$100,000.

If Syracuse Will Subscribe That Sum, "Mammoth" Auto Plant Will Locate There.

A particularly alluring phase of the bonus game is now occupying the attention of the Syracuse (N. Y.) Chamber of Commerce. A "mammoth plant" is to be erected in the Saline City by "wealthy New York capitalists" for the "construction of motor coaches of the automobile type for passenger purposes, special vehicles being manufactured for hotels, railroad depots and sightseeing purposes." The offer to locate in Syracuse is made on condition that city capital to the amount of \$100,000 be subscribed for the erection of a factory, the subscribers to receive in return gold bonds at 6 per cent!

The New Yorkers agree to supply all working capital, patents and designs, sell their own stock and furnish funds for that expenditure. It is understood the working capital will be large. None of the coaches to be built would sell for less than \$10,000. Officers of the chamber are hopeful that the desired amount for the building of a plant might be raised, and the matter will be brought up for consideration at the next meeting of the organization.

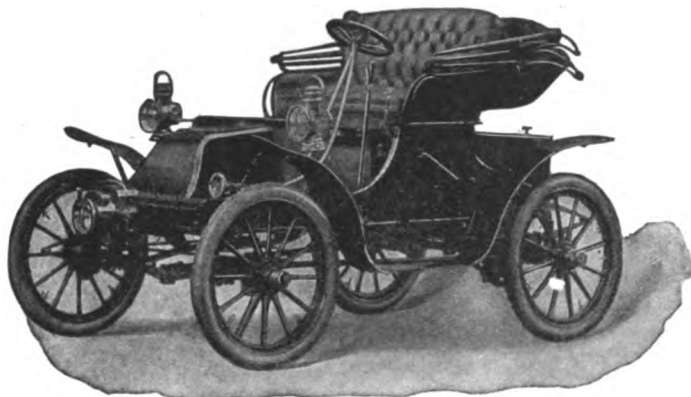
In case the company goes there it is specified that a plant of sufficient proportions to accommodate five hundred workmen be built. There must be ample room for any future growth of the concern in the way of land for additional buildings, and also there must be good switch connections with the railroads. Start would be made with one hundred skilled hands.

A. C. A. Tour to Gettysburg Begins.

To-day the spring tour of the Automobile Club of America from New York to Gettysburg and back will begin. Fourteen entries were in hand yesterday, and that number of cars, or more, containing members and guests are expected to start on the tour this morning. There will be no concerted start from a given point, and the number actually participating in the tour will not be known until the tourists meet at the Hotel Flanders, in Philadelphia, for the first night's stop.

The trip will be one of 634 miles, all told, and will extend over eight days. The itinerary, in brief, is as follows: May 26, to Philadelphia, 102 miles; May 27, to Harrisburg, 114 miles; May 28, to Gettysburg, 38 miles; May 29, to Harrisburg, 38 miles; May 30 to Philadelphia, 114 miles; May 31, to Atlantic City, 60 miles; June 1, to Asbury Park, 93 miles, and June 2, to New York, 75 miles.

The tourists will spend Saturday afternoon and Sunday forenoon at Gettysburg. On Monday night there will be a dinner at the Hotel Flanders, Philadelphia, and a number of members who are unable to participate in the full run are expected to join the tourists at the dinner.



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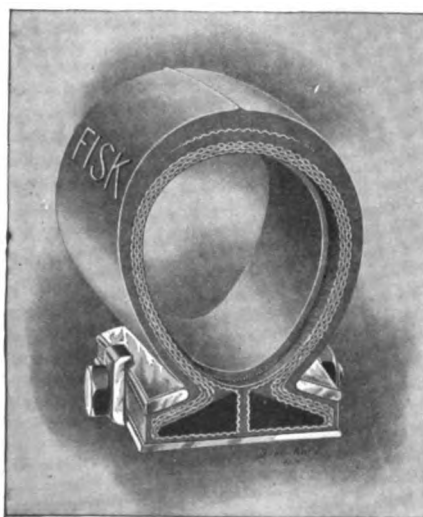
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NEW YORK, MAY 26, 1904.

More Burdens for Tires.

With scarcely an exception, each year has witnessed an addition to the always great burden the pneumatic tire has to carry. Had it not been for marked improvements in the constructional methods employed by the tire makers, and the consequent production of vastly improved goods, the tire would long ere this have sunk under its burdens and been declared a failure. As it is, there are not wanting makers and users who characterize it as the weak spot in the modern automobile, and who cry aloud for its replacement with something better. The fact that nothing better is available, and that tire makers have spent time and money in generous profusion to accomplish almost impossibilities, and have literally accomplished wonders, is all that has availed to hold these critics in check.

The present season is little more than fair-

ly entered upon, and already two new burdens are perceived to have fastened themselves upon the groaning tire. Speeds have been increased materially, and a new factor has been introduced by the very general fitting of tops to touring cars, resulting in the imposition of new and unallowed for strains and stresses, all of which eventually find their way to the tires.

One of the chief enemies the tire maker has to cope with is internal heat—that produced by the act of causing the tire to revolve at a high rate of speed while at the same time carrying the weight of the car and its occupants. When both speed and weight are materially increased the effect is not difficult to perceive. Last year there were but a handful of high powered American touring cars; now there are a very considerable number of them, and each week sees them increasing with great rapidity. These cars easily reach such speeds as thirty, forty and even fifty miles an hour on occasion, while their regular pace, uphill and down, over all kinds of roads, is very much in excess of anything possible of attainment previous to this season. Thus the demands made on the tires are infinitely more severe than anything yet experienced.

The influence of tops on tires is less marked, but yet one not to be overlooked. These tops add weight, and they bring new strains to bear on the tires. Frequently they are encumbered with baggage, adding to the strain to an extent out of all proportion to the extra weight in pounds. The cars sway from side to side, and the tire becomes a sort of fulcrum upon which all the stress is concentrated, its cohesion to the road preventing its relieving itself.

It will be small wonder, in the face of all this, if, in spite of the use of larger tires, seemingly inexplicable troubles are not sometimes encountered before the season is much further advanced.

Passing of a Steering System.

Tiller, or lever, steering is in a fair way of being forgotten, so completely does the wheel steer rule with the automobile of today. It seems ages ago when the discussion raged as to the respective merits of the two systems; yet it is but little more than two years, and at that time it was the tiller which was in general use, while the wheel was, albeit already taking the aggressive, the newer and least used form.

To this day motorists who used the tiller speak of it in terms of affection, and dwell upon the marvellous ease and certainty with

which a car fitted with it could be steered. It was, of course, best fitted for use on runabouts and similar light cars, and its transcendent merits were most observable when driving in congested traffic on city streets. The ease and rapidity with which such a car could be sent in and around narrow spaces, dodging blocks and edging its way where other vehicles would be hopelessly entangled, was marvellous.

Fashion has, apparently, decreed the demise of the tiller, and in a short time it will be seen no more. The wheel steer is the better form for many types of cars, and as a result all, or practically all, must be equipped with it.

Caught Red-handed.

Retribution has overtaken one maker of city-to-city records, and it is to be hoped that this will have some deterrent effect upon those who encourage these deliberate outrages upon the law and propriety.

As has been maintained by the Motor World previously, there is more of injury to the trade and sport done by these record attempts than there is benefit derived by those who succeed in making records.

Beyond the publicity obtained at the time in the daily and weekly press, such achievements as a run from New York to Boston in 8 hours and 15 minutes are of no value whatever to the industry, and have little sporting interest. The fact that it can be done by any one of several makes of motor cars is generally recognized, but that is of no consequence, because if a man wanted to get to Boston in a hurry he would take an express train and make the trip in five hours.

While the performances are of no value except for advertising, they are a positive detriment to the cause of automobilism. The publication of such doings in the newspapers excites the indignation of those who dread fast running automobiles, and the performance thus serves as a justification to motor-phobes for their prejudices and reinforces their opposition to automobilists generally.

In the interests of the whole trade, the National Association of Automobile Manufacturers should pledge its members not to encourage these lawbreaking trips. Publicity gained in some other way will be better.

Cup Race Considerations.

"It would be better to have raced and lost than not to have entered a team," say some commentators on the pitiful doings in connection with the effort to form a team for the international cup race. Yes, it would be

better to race and lose—if, though losing, one could make a good race. It is no disgrace to lose if one makes a good fight before doing so.

The cars of all the other nations entered have been compelled to show their fitness to compete by most serious and strenuous tests. The winner of the French elimination trials averaged sixty-two miles an hour in a run of several hundred kilometres. This means a scope of power and speed and stability beyond anything that yet has been produced in this country. The cars entered for the cup race are of about the same class as the 90 horsepower Mercedes used by W. K. Vanderbilt, jr., at Ormond last January, or better. Cars not as good as this have no business in the race. In this country we do not produce cars of this class as yet, and it is no disgrace to admit it.

It is known and recognized that, although the American automobile industry started five years later than did the European, it has made such rapid strides that it is now producing touring cars and vehicles for all around American use that are right up to date, reliable and smooth running, and which are in many ways equal to foreign cars. We have not had the experience in building high powered racing cars for long road contests, because we have had no incentive so to do. It can do no harm to frankly admit this when every one knows it to be true. The American makers have not seemed to take this matter seriously enough to put forth their best efforts.

It has been urged that it would show "gameness" to send a team, however weak, to the race, and that not to send a team would be a confession of inability to make cars good enough, and that this would be used against the industry by foreign makers. This is a wrong way of looking at it. We can very well afford to confess that we have not yet reached the stage of building successful high powered racers, and "stand pat" with the further assertion that we do build successful touring cars for practical service on American roads, as was proved by the run from New York to Pittsburg last fall, a test to which few foreign cars would be equal. That is what we can say if we stay out of the race, adding, what is quite true, that our makers have not yet had time to take up seriously the question of big road racers, but will do so later.

If, on the other hand, we should try to be "game" by sending cars known to be unequal to the task of being dangerous competitors

and let them start and fail to be "in the running," our foreign competitors would be able to point with scorn to our "best product." Cars entered for the cup race are naturally and fairly considered to be the best it is possible for the country they represent to produce. If any country should send other than its best cars it would merit a severe "knocking" of its industry. If we say we build good touring cars and can prove it, and, in a manly, sportsmanlike way, say that we have not yet attained proficiency in building cars of the cup race class, our foreign competitors are limited to innuendo in their attacks upon the trade; but if we sent over cars that are hopelessly outclassed we would be furnishing them with something tangible for their attacks.

So it is undoubtedly a good thing that America will not be represented in the cup race this year. The lamentable part is the shilly-shallying through which the decision was reached. It is doubtful if ever before anything so disgraceful to the spirit of American sportsmanship has been witnessed as the incomprehensible incompetency with which the cup race question has been handled by the Automobile Club. The tours and all other contests of this august body, the details of which are left to the secretary, are placed in striking contrast by their splendid management. For two successive years, however, a committee of really excellent, but inexperienced, gentlemen has made a farce of the cup race preliminaries. It should not be allowed to do it again. The failure of the cars entered is more excusable than the failure of the committee to make arrangements for proper tests and conditions compelling the cars to be ready ahead of time. The trouble with all the entrants was that they were not ready early enough to be "tuned up" before the time of trial. It may be that all of them, after a few weeks of running and fixing up, such as the foreign cars had, might have been equal to making a showing in the race. The fact, however, is that they were not ready in time, and could not prove fitness when called upon, and so it is proper that they should not be sent to Germany. There should have been no second trials.

There are many lessons to be learned from the lamentable fizzle. It is to be hoped that they will be taken to heart, and that in another year we will undertake making cup racers and proving them such in a solemn and earnest mood, and in abundant time to avoid eleventh hour fiascos.

Mark well Wichita, Kan., and its four doughty councilmen! Having been instrumental in obtaining the passage of an ordinance fixing the maximum speed of automobiles at six miles an hour, they manfully acknowledged themselves wrong when given a practical demonstration of what a crawl six miles an hour really is. Now they frankly admit that ten or twelve miles is not a whit too high to fix the limit, and say they will vote to so change the existing ordinance. Would that there were more Wichitas and more councilmen of this calibre!

Dust is admittedly the motorist's greatest enemy. Just when touring becomes most enjoyable and the season approaches its height, the pastime is robbed of its chief pleasure by the necessity of travelling in clouds of dust. The evil sufficed long ago to break up club runs, and now motorists seldom travel in parties, preferring to string out and so escape companions' dust. If the time ever comes when improved roads are dustless as well, users of motor vehicles will be among the great beneficiaries of the blessing.

What motorist has not at some time or other experienced the need of a small vise when making a roadside repair? They are to be had in all sizes and weights, and at prices that are almost beyond belief. We were recently caught with a snapped chain link and reduced to the slow and toilsome process of riveting the pin with two stones—a job that consumed more than an hour. On another occasion a small vise costing less than a dollar enabled us to make a similar repair in a few minutes.

A queer side light is thrown on the almost universal desire for speed by the remarks attributed to a Washington dealer. When arrested for illegal speeding, he admitted that he might have been going at the rate of twenty-eight miles an hour, saying that the machine was for sale, and that it was necessary to gear them up to a high rate of speed in order to satisfy customers! Thus do we see the speed propensity crop out even where buyers of second hand cars are concerned.

A handy tool to carry along, especially on an extended trip, is a riveting hammer. Aside from its chief use—that of riveting the pin of a broken chain—it can be made to do service in a variety of ways, which its peculiar shape lends itself to.

FINAL FIZZLING OF CUP TEAM PRETENSIONS

**Committee and Contestants go to Empire Track With Lawyers and Talk, Talk, Talk—
Christie Fails to Appear; Winton People Decline Ridiculous Agreement; Peerless Car
Withdraws After Short Run and That's the End of the Disgracing Farce,**

Following closely upon the first farcical proceedings of the race committee of the Automobile Club of America with the international cup race candidates, the final fiasco of the efforts to form a team was reached last Thursday at the Empire City track, just outside of New York. There will be no representation of this country in the great race in Germany on June 17. That is now settled, but the way the decision was reached was thoroughly unsettling to the prestige of the club and of the sport and industry in this country.

Usually an anti-climax robs the real climax of effect. This, however, was not the case with the climax of the abortive efforts to form a cup racing team that was reached at the Empire City track. The previous failures of the entrants to perform satisfactorily did not prepare people for the utter collapse of all hopes and prospects of a team, and the fashion of that collapse at the burlesque secondary trials. It is difficult to describe what happened calmly, and harder still to find fitting adjectives to characterize it. The whole proceedings were anæmic. The inanity of it all was so disgraceful and disheartening that when even to the most optimistic came to think it over the affair seemed simply gruesome. It is hard to place the blame, for there was blameworthiness all around and little that was mitigating.

Was it that the cars would not run? Was it that the committee was incompetent? Was it that the contestants balked or withdrew? It was not wholly any one of these things that caused the fizzle, and yet some of them all.

The second and final tests for the candidates for the team were called for 1 p. m. on the one-mile trotting track. The test proposed by the committee was that the cars should run 180 miles on the track, with a control a quarter of a mile long and five minutes duration every thirty miles.

The programme had been announced on Wednesday of the week before, and the committee and the entrants had had eight days in which to prepare for the test.

When the appointed time arrived one car, the entry of Walter Christie, was not on hand. The committee declared it ruled out. Barney Oldfield, with the Winton Bullet No. 2, and one of the new Peerless racers of Louis P. Mooers, with Charles G. Wridgway in the driver's seat, lined up at the tape.

About forty cars were parked under the grandstand, and between three and four hun-

dred spectators were on hand, a few from Boston, Philadelphia and other places at a distance. President W. E. Scarritt of the A. C. A. was unavoidably absent because of being in St. Louis, but former President A. R. Shattuck and a number of the prominent members of the club were present. All of the race committee of the club, excepting Chairman O. W. Bright, who is in Europe, were on hand, although W. G. Brokaw, who arrived in a car with W. K. Vanderbilt, Jr., took no part in the work of the committee. The onus of the occasion therefore devolved upon Dave H. Morris, George Isham Scott and the secretary, S. M. Butler. The details of the practical arrangements were, however, in charge of Albert C. Bostwick, who, although not a member of the committee, had accepted an invitation to be "acting chairman" of the committee for the occasion, because some one with executive ability and a practical knowledge of racing affairs was needed.

Oldfield and Wridgway sat in their cars at the tape awaiting the pleasure of the committee, and the spectators gazed expectantly. Percy Owen stood beside Oldfield and Louis Mooers stood beside Wridgway. One of the committee approached Mr. Owen and told him that he must sign an agreement to assume joint responsibility with Mooers for whatever might happen on the grounds or track during the trial before Oldfield could start. Owen had previously refused to sign this agreement, and he again refused, although told that Mr. Mooers had signed it. Upon this final refusal of Mr. Owen to sign the agreement he was told to remove his car from the track, and he and Oldfield withdrew. Mr. Wridgway was then told that he would be the only starter. Thereupon Mr. Wridgway hastily called upon Mr. Mooers to tell him which was the sparking and which the fuel lever, for the car had arrived in New York only just in time to be taken to the track, and, the levers being disposed in an unusual way, Mr. Wridgway did not know one from another.

At 1:05 o'clock Mr. Wridgway, in the Peerless racer, started on his journey, running alone about the track and being the sole object of attention from the timers and scorers. After Mr. Wridgway had run nineteen miles and had got the car settled to a pace that suited him, Mr. Mooers told the committee that, inasmuch as there was no chance for any one else to be on the team with him, he would not care to go over alone and would withdraw his entry. Mr. Wridgway was

therefore stopped at the point of control (at the sixth furlong pole) on his twentieth mile. He had then run nineteen and three-quarter miles. The time made by Mr. Wridgway was as follows:

One mile, 1:35; two miles, 2:52 1-5; three miles, 4:00 2-5; four miles, 5:25 2-5; five miles, 6:42 1-5; six miles, 8:01; seven miles, 9:19 3-5; eight miles, 10:38 3-5; nine miles, 12:00; ten miles, 13:28; eleven miles, 14:59 4-5; twelve miles, 16:26 2-5; thirteen miles, 17:52 4-5; fourteen miles, 19:20; fifteen miles, 20:50s; sixteen miles, 22:21 1-5; seventeen miles, 23:44 2-5; eighteen miles, 25:07 1-5; nineteen miles, 26:38; nineteen and three-quarter miles, 27:43. The separate time for each mile was as follows: 1:35, 1:17, 1:17 1-5, 1:16, 1:16 4-5, 1:18 4-5; 1:18 3-5, 1:19, 1:21 2-5, 1:28, 1:31 4-5, 1:26 3-5, 1:26 2-5, 1:29, 1:30, 1:31 1-5, 1:23 1-5, 1:22 4-5 and 1:20 4-5.

It was freely commented that Mr. Wridgway deserved much credit for being willing to drive the car for Mr. Mooers, believing when he agreed to do so that there would be three cars on the track. The spectators did not, however, take as much interest in the lonely car circling the track as they did in seeking information concerning the withdrawal of the Winton car. It was quickly learned that this second trial granted to the cars was largely an affair of quibbling over legal technicalities. The committee was on hand with W. W. Niles, the counsel of the club, and Percy Owen had his lawyer with him. A quorum seemed completed by the presence of Charles T. Earl, the undertaker. All the lawyers and all the wise men couldn't manage to get things straightened out for actual test racing, however.

The document which Percy Owen declined to sign on behalf of the Winton company was one drawn up by the club's counsel, Mr. Niles, and read as follows:

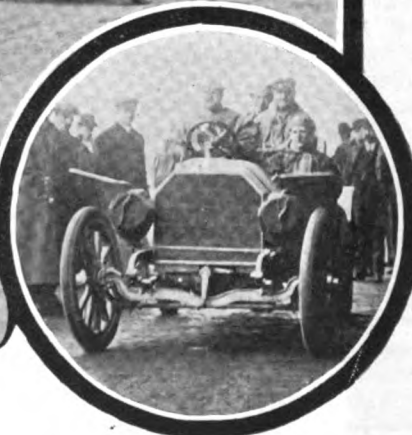
This agreement, made this 18th day of May, 1904, by and between the Empire City Trotting Club, the Automobile Club of America, Dave H. Morris, William Gould Brokaw, George Isham Scott, Winthrop E. Scarritt, Osborn W. Bright and Albert C. Bostwick, parties of the first part; the Winton Motor Carriage Co., the Peerless Motor Car Co. and the Christie Iron Works, parties of the second part; and Louis P. Mooers, Barney Oldfield and Walter Christie, parties of the third part, witnesseth:

Whereas, a race or series of races or speed trials of motor vehicles is to be held on the grounds of the above named Empire City Trotting Club in Westchester, N. Y., on May

A GROUP OF INTERESTED SPECTATORS.

WRIDGWAY AND THE PEERLESS,
ALMOST READY TO START.

OLDFIELD, WITH THE BULLET IN TOW.

OFFICIALS' CAR, ACTING CHAIRMAN BOST-
WICK ON THE STEP.

18, 1904, or such other day as may hereafter be agreed upon; and

Whereas, The said trotting club has allowed the use of its grounds, and the said Automobile Club of America has agreed to superintend the timing of the trials and matters connected therewith; and

Whereas, The said parties of the second part are to enter motor vehicles for such trials, which vehicles are to be driven by the parties of the third part;

Now this agreement witnesseth, that the parties of the second part and the parties of the third part voluntarily assume all risk of accident or damage or injury to themselves or their property while engaged in such speed trials or in preparing therefor, and voluntarily assume all risk of accident, damage or injury to themselves or their property while themselves or their property are upon the grounds of said Empire City Trotting Club, whether such accident arise from any defect in the condition of the grounds of said trotting club or any structures thereon, or by reason of any defect in the machines to be used in such trials or by reason of any negligence or mismanagement of the parties of the first part, their agents or servants or otherwise, and expressly agree that the parties of the first part shall not be liable under any circumstances for damages or injuries arising out of or in connection with such speed trials whether caused by defects in the vehicles, defects in the condition of said grounds or structures thereon, or negligence of the parties of the first part, their agents or servants or otherwise.

And the parties of the second part hereby agree and covenant to indemnify and save harmless the parties of the first part of and from any and all claims for injuries, damages or other claims whatsoever, to person or property, or otherwise, which may be made by persons, corporations or other parties arising out of or in connection with the holding of such speed trials or any acts, negligence, mismanagement or omission in connection therewith or defects in the condition of the aforesaid grounds or structures thereon.

This agreement is to be binding and in full force during all the time while the persons interested in such speed trials or the vehicles to be used therein are in or upon the grounds or structures of the said Empire City Trotting Club.

The agreements herein contained to be binding upon the parties hereto, their successors and legal representatives.

In witness whereof, the parties hereto have caused their presents to be duly executed and their seals to be affixed.

This agreement was not proposed to the contestants until the afternoon of the day before the race. Then Messrs. Christie and Mooers were communicated with by telephone, and both said they would sign it, although they did not do so at the time. A copy of the agreement was submitted to Percy Owen at 4:15 o'clock on Wednesday, May 17. Mr. Owen, not being an officer of

the Winton company, naturally said that he would have to consult the company before signing. He called up Mr. Winton at Cleveland by long distance telephone and explained matters. His lawyer in New York told him that signing the agreement would render the company responsible for any accident that might be caused by the other contestants, or any mishap among the spectators not caused by the contestants. Mr. Owen was instructed not to sign the agreement, and so informed the committee. He was asked if he had anything to suggest, and replied that it was not his place to make suggestions. This was the night before the day of the trials. At the track, the next day, when he was called upon to sign the contract, no alternative was offered except to withdraw from the trials. After he had finally declined to sign the agreement, and Oldfield had been ordered from the track, Owen again called up Mr. Winton at Cleveland and reported the proceedings. He was told that he had done what was proper.

The crowd on the grounds broke up into little knots in front of the grandstand, while the Peerless car continued its solitary way, and for an hour after it stopped running, discussed the situation. Owen made the point strongly that he and Oldfield and the Winton company were willing to be responsible for any damage caused by the Bullet or by them, but were not willing to assume liability for any smash-up between the cars of visitors, or any fire or any fall of a spectator on the grandstand, or any damage done by the Peerless car. It was suggested to the committee that the contract be changed so as to make the contestants individually responsible for any damage done by them, instead of jointly responsible for all happenings. The club's lawyer was present, and this might have been done easily, but the committee did not choose to do it.

The comment on the situation was varied, but the general disgust was large. Some thought that the committee should change the agreement so as to make it acceptable to the Winton people, urging that in such a form it would be just as protective to the club and committee. Others thought that, as there was not a great crowd present, and only two contestants and the danger of accident small, the committee, in the interest of sport when so much was at stake, should waive its agreement and let the test go on. Still others thought that the Winton company was stickling over what was only fair and that Owen should sign the agreement and let the test go on. Mr. Mooers himself remarked:

"One has to take chances to be a sportsman. The whole international race is largely a matter of taking chances and I'm willing to take them."

So it went; it was generally conceded that the committee was derelict in leaving so important a document to be presented at the eleventh hour, and a few even insinuated that it had been done for the purpose of driving

away the entrants; but there was blame for every one, even for Mooers because he decided to withdraw. Suggestions of all sorts were made, and a dozen things were proposed which seemed reasonable, fair and practicable. There were a number of things that might have been done to bridge the difficulty. The great blight was that nothing done by persons other than the principal of inanity. There was a great deal of thinking done by persons other than the principals, and many severe things were said. Epithets were plentiful and "kindergarten methods" was the sort most common. The committee retired within its dignity, and after two hours of pondering evolved the following decision, which was handed out in written form:

"In view of the fact that Mr. Mooers has withdrawn his car, that Mr. Christie failed to compete in the trial, and that the Winton company declined to abide by the regulations provided for the trial, it is decided that no car be recommended to represent America in the International races this year."

Thus ended the second effort to get a team for the big race.

After it was all over Oldfield wanted to go on the track and run a hundred miles for fun. As the track had been turned over to the club for the day, and the committee had requested the management not to allow any of the competitors to use it, Oldfield could not be accommodated. B. M. Shanley, jr., with the 90 horsepower Mercedes formerly owned by W. K. Vanderbilt, jr., went out on the track and reeled off a few miles, one of them in 1:14 and several other foreign cars also tried a few spins.

About 4 o'clock a teamster hauling half a barrel of gasoline, some new tires and other articles arrived at the track and inquired for Mr. Christie. It was afterward learned that Mr. Christie had been delayed waiting for a new carburetter to be delivered to him. He was detained until 1:30, and then, having learned by telephone what had happened, he made no effort to go to the track.

Indianapolis Gives Cups and Cash.

Amateurs and professionals will be separated during the Decoration Day race meet to be held at Indianapolis, Ind., the prizes for the former being confined to cups, while the latter will have cash as well as cups awarded them.

A five-mile event, for professional drivers with machines in the one-minute class will be the feature of the programme. The entrance fee for this event will be \$200, the money to be added to the stake of \$500 offered by the management of the meet. So far, three entries have been received for this race, and two more are likely to be added to the list, so that the purse will be at least \$1,100 and may be possibly raised to \$1,500. The winner takes all, and in addition a beautiful trophy cup.

The Indianapolis Automobile Association has been incorporated and will have charge of the meet.

COMMITTEE DISALLOW PROTEST

British Cup Team Unchanged—Scenes and Incidents of Isle of Man Trial.

By refusing to sustain the protest of S. F. Edge against their decision, the committee of the Automobile Club of Great Britain have put it squarely "up to" that gentleman to abide by the team selection already announced, or, by refusing, to cause a total upheaval in its composition. As a result of the trials held on the Isle of Man last week, it will be recalled that this team was chosen to represent Great Britain in the contest for the Bennett Cup, to be run in Germany on June 17: 1, S. F. Edge; 2, Sidney Girling, and 3, Charles Jarrott.

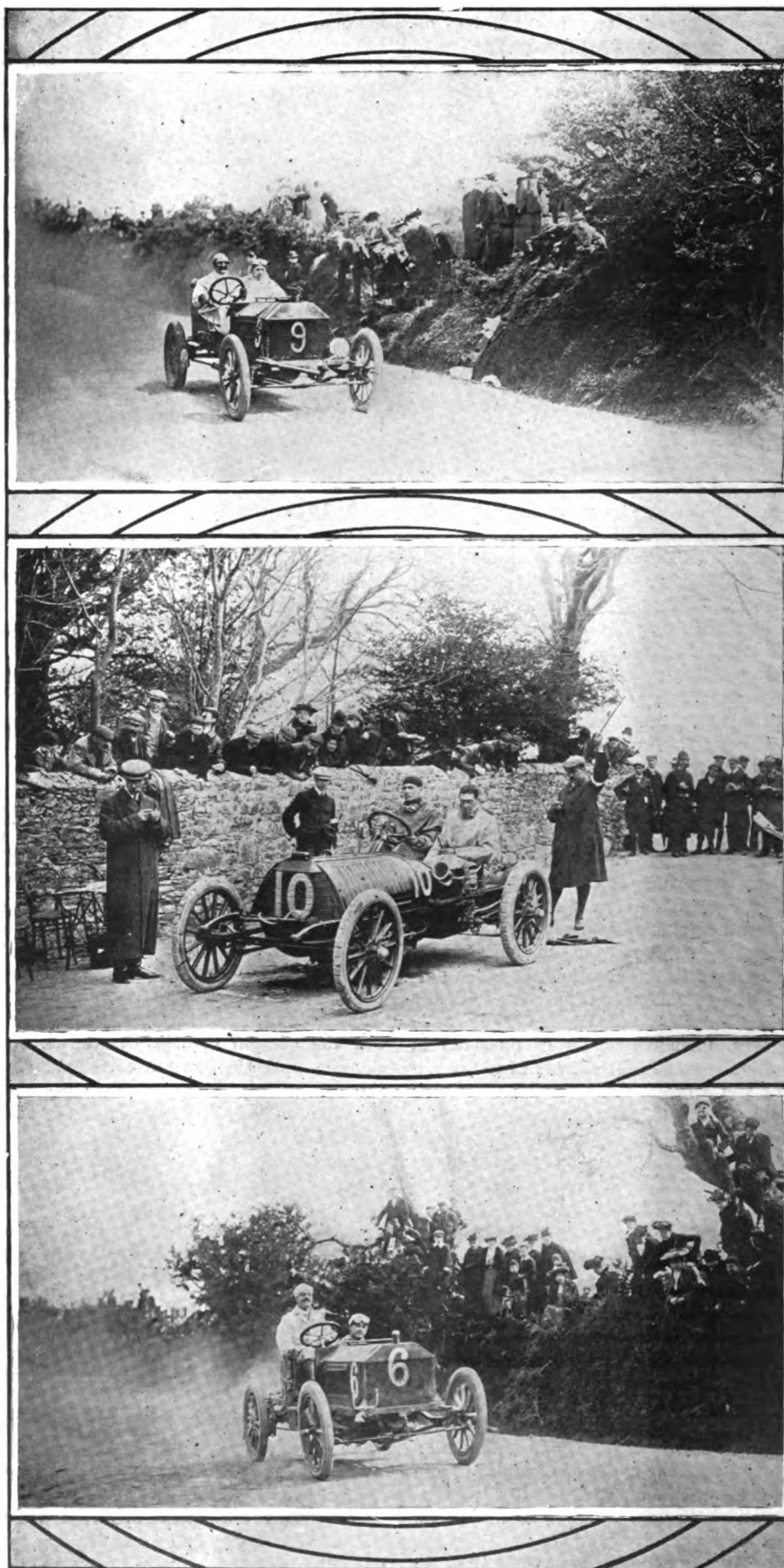
Edge promptly lodged his protest, declaring that he would not go unless Earp, who met with a bad accident which put an end to the trials on the last day, was substituted for one of the Wolseley drivers.

The committee of the Automobile Club met to consider the protest this week, and, according to a cable report, decided to stand by their ruling that the team should consist of Messrs. Edge, Girling and Jarrott, with Messrs. Hargreaves and Stocks as reserves. In view of this decision, it is understood, Edge will adhere to his determination to withdraw from the race, and as the reserves will follow his lead England would thus probably be represented by three Wolseleys, the makers of which have formally offered the Automobile Club a third car, which, if accepted, will probably be driven by the Hon. C. S. Rolls. It is quite possible, however, that Edge will think twice before resorting to such extreme measures, or even that the Napier Company, which has so much at stake, will intervene in the matter.

Fuller reports of the first days' trials confirm the belief entertained beforehand that the course selected for the forty-eight mile run, eight times repeated, was so dangerous as to be unfit for high speeds. So clearly was this seen that the committee gave way and substituted scheduled periods in their stead. Even this helped matters but little, for while the most dangerous parts were protected there were bends and turns around which speed had to be reduced very low if they were to be negotiated in safety.

An immense crowd had gathered at the starting point on Tuesday, May 17, and a most inspiring and picturesque scene was presented. The appearance and costumes of some of the contestants was striking in the extreme. The first man to start was Stocks on his little Napier of 35 nominal horsepower. Edmond should have gone next, but he had found water in his gasoline tank, so could not take his turn. No. 3, J. Hargreaves, a M. F. H. and well known amateur automobilist, therefore came second, as cool as a cucumber, and clad in a well worn slip-on, and cap with a most pronounced and horsey looking peak. Off he pelted up the hill, and as he took the bump

Snap Shots at the British Cup Trials on the Isle of Man.



S. F. EDGE (Napier) DESCENDING BRAY HILL.
SIDNEY GIRLING (Wolseley) READY TO START.
CLIFFORD EARP (Napier) ON HIS FIRST CIRCUIT.

FRENCH CUP TEAM CHOSEN

New Firms Score, Mors Being the Only Former Member to Win a Place.

New blood comes to the front as the result of the French eliminatory trial for the Bennett Cup race, held on the Adrennes Circuit on Friday, May 20. The contest was fierce, but short, sharp and decisive, the great Panhard firm failing to run one, two,

The average speed made by Thery, the first man to finish, is given as sixty-two miles an hour—exceptionally good for the course. After the three leaders the men finished in this order: Gabriel, Dietrich; Leblon, Serpollet; Caillos, Richard-Brasier; Teste, Panhard; Farman, Panhard; Pedsel, Serpollet; Clement, Clement.

The Ardennes Circuit is located in the Northeast corner of France, adjoining the Belgian Ardennes. The course as originally laid out measured 150 kilometers, but the French Minister of the Interior insisted that

over a culvert a few yards from the start he rose on his seat as he would in the stirrups. Altogether, his style was distinctly sporty. Next to the tough looking M. F.H. was Earp—a man hitherto unknown to fame, but who handled his Napier well and looked very workmanlike in a marvellous Norfolk suit of white rubber.

Next came, or rather went Edge. He was a most striking figure, with blue skull cap and a white rubber poncho; in fact, the car and its crew looked most motoristic, as the mechanician was dressed to match the hawk-



CHARLES JARROTT (Wolseley) ON A TYPICAL MANX ROAD. WITH MOUNTAINS IN THE DISTANCE.

eyed occupant of the driver's bucket. With many a good wish, the Napier crack vanished on his third up the hill and round the bend, which swallowed up the competitors one by one as they flew south, a short quarter of a mile from the starting point. Next was Girling on the 70 horsepower Wolseley, which soon became recognized for its sharp note of exhaust. The third Wolseley started after Girling, and when its sharp snout and the brown leather coat of Jarrott were recognized by the crowd a hearty cheer went up for the man who won the 1902 Ardennes Circuit.

And next a great sensation was created. Hemery's Darracy had been overdosed with oil, so that when No. 4 was called he promptly rendered himself invisible in a cloud of blue smoke which cut the eyeballs, while from the cloud issued a series of most appalling reports and flashes as the tortured engine back-blazed into its apology for a muffler. As he was not ready, he put back a few yards to drain off his oil.

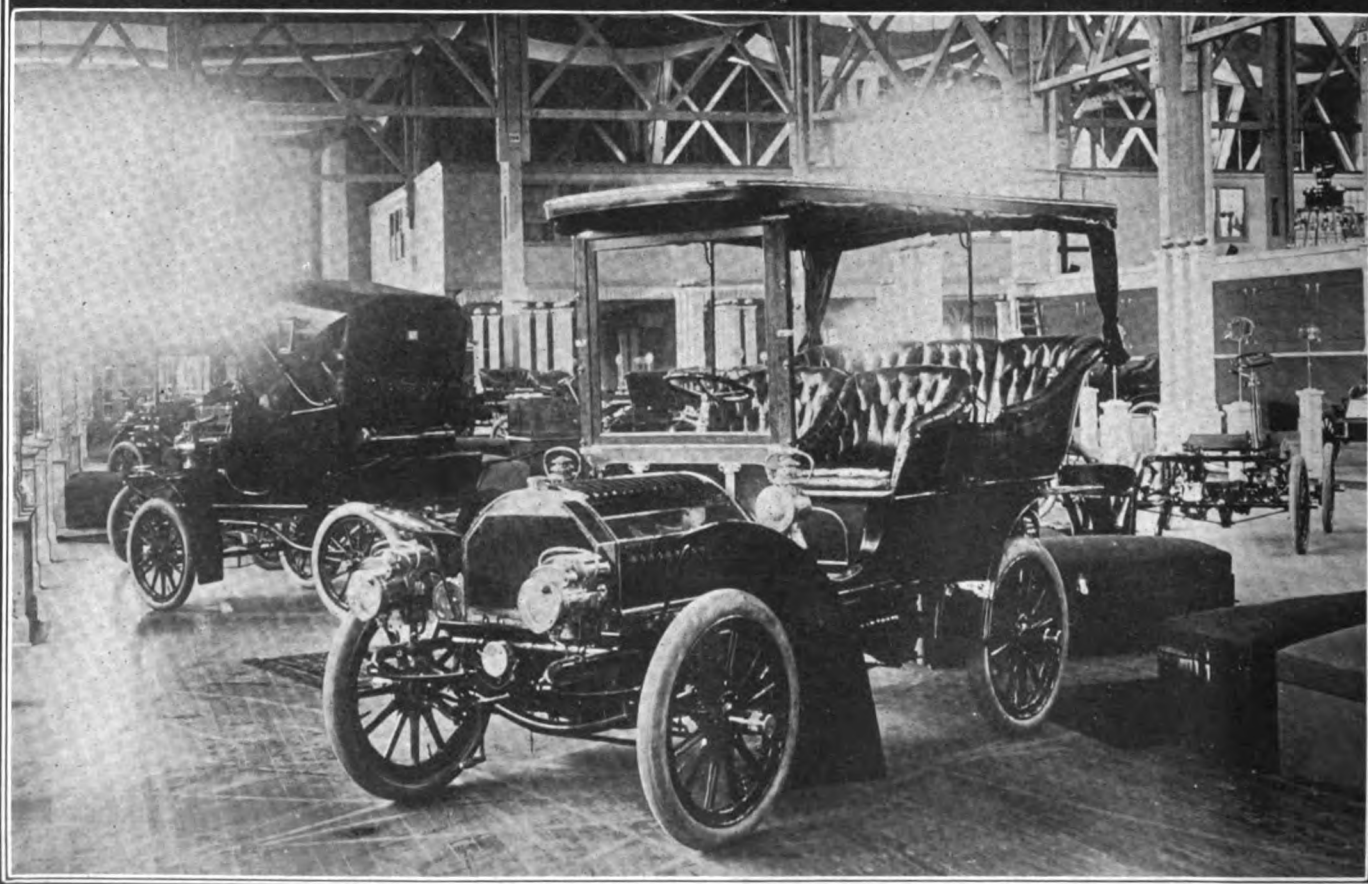
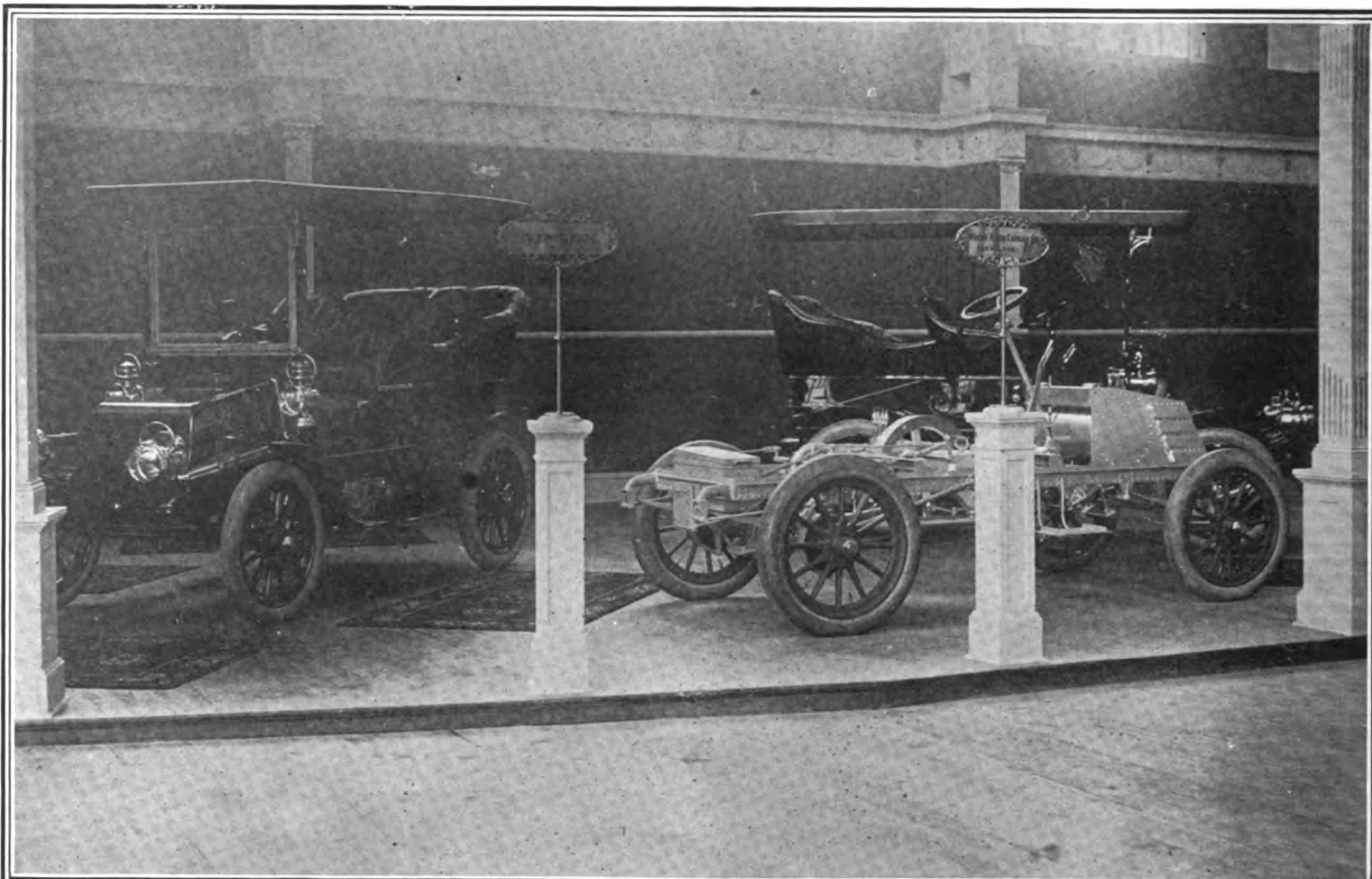
three. For the first time in the history of the cup contests it will be unrepresented. As placed at the end of the race, and confirmed by the judges without hesitation, the team which will represent France is as follows:

Men.	Machines.
1—M. Thery.....	Brasier.
2—M. Salleron.....	Richard-Brasier.
3—M. Rougier.....	Tureat-Mery.

Of the twenty-nine cars which started only ten finished. Particulars of the casualties which put so many machines hors de combat are entirely lacking, the cablegrams confining themselves to the bare facts. It is conjectured, however, that a number of the contestants finding they had no chance to finish in the first three dropped out; at the same time, the known difficulties and dangers of the course undoubtedly disposed of a number of them. No serious accidents—which were feared—occurred, however.

a number of town should be cut off, as he feared accidents; the course was than reduced to about 93 kilometres. This was covered six times, making a distance of about 342 miles. The comparatively short stretch was then taken in hand, repaired, covered with a dust layer at an expense of \$5,000, and heavily policed by the military. Every possible precaution against accident was taken, as it was felt that a repetition of the Paris-Madrid horror, even on a small scale, would end racing of all kinds in France. Happily these provisions were effective.

The roads are, in the main, good, but winding and frequently narrow. Between Rethel and Vouziers there is an absolutely straight road, with only two or three bends through small villages where the cars can be driven at their highest possible speeds. Over the rest of the route the road is of a somewhat serpentine character, and the occasional turning necessitated cautious driving as well as a perfect knowledge of the course.

Automobile Exhibits at St. Louis Exposition,**THE WINTON MOTOR CARRIAGE CO.—WINTONS.****THE GEO. N. PIERCE CO.—PIERCE GASOLENE CARS.**

EXHIBITS ELICIT ENCOMIUMS-

St. Louis Visitors are Vastly Pleased with Showing Made—Two New Cars Staged.

St. Louis, May 21.—While not yet entirely completed, the automobile exhibits are now so arranged that they make an extremely fine showing. It can now be seen that the N. A. A. M. spaces are the handsomest in the building, being in every way worthy to set off the exhibits they house. Visitors are outspoken in their approval of the scheme of decoration, and especially of the overhead portion. Such an impression is created that Colonel Albert A. Pope, who, with Senator Latimer, of South Carolina, made a tour of the Transportation Building, remarked that our decorations were even superior to those of the French exhibit. This is high praise, indeed, for the French have not spared pains to make a fine showing. Their exhibit will be about completed this week, and they have on view some magnificent specimens of workmanship.

Great credit should be given to Messrs. Slusser and Fest, the N. A. A. M. representatives at the Exposition, for having things so nicely arranged. The writer, having been on the ground before the fair opened, saw many of the obstacles they had to overcome. These were so numerous that now, after all is complete, there will be few, if any, who will ever know or give credit for what has been done. As the exhibitors arrive they express their satisfaction and admiration of this exhibit,

and it seems strange to them that there is no hustling to do to get in shape. To push your car on the space, which is all that is necessary, is about the easiest thing that ever happened in the automobile show business. Each day the crowds grow, and the interest grows in proportion. It would have been much better, however, had we been located

on the opposite side of the building, as that is where the people seem to get in first.

In the Pope exhibit is shown a new electric tonneau car, with canopy top, and running gear in yellow, with body in dark green, panels yellow striped, wheel steer. This car is very neat and handsome, and is finely upholstered in black.

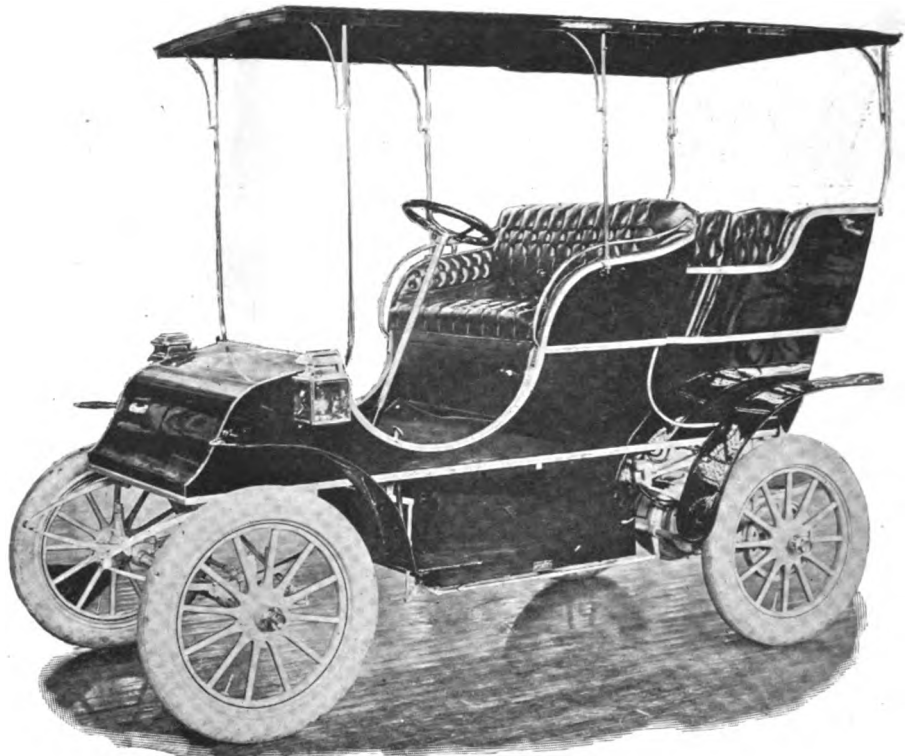
The Pierce exhibit shows four models, one of which is a Stanhope, fitted with canopy, with hood extending so as to cover seats in front and fitted with a glass front back of front seat, and leather side curtains. This innovation will commend itself to many, as it affords covering in hot weather, without the inconvenience of a victoria top, and the finest of protection in rainy or cold weather.

There have been quite a few sales made the last week from the various stands. Mr. Johnson, in charge of the White exhibit, sold two cars one morning last week. The Rambler people have turned quite a few sales over to their local agent.

Among these in the city last week were Winthrop E. Scarritt, president of the Automobile Club of America, and A. A. Post, of the A. A. A. touring committee.

In illustrating the electric exhibit last week, the National Motor Vehicle Company's display of smart looking vehicles propelled by the "silent, scentless power" was captioned Baker Electrics—an error which undoubtedly readily disclosed itself to the well informed.

A garage to cost \$25,000 will be erected by the Euclid Avenue Automobile Company on Euclid avenue, between Doan and Fairmount streets, Cleveland, Ohio. The structure will be two stories in height and have a frontage of 40 feet on Euclid avenue and will be 150 feet deep.

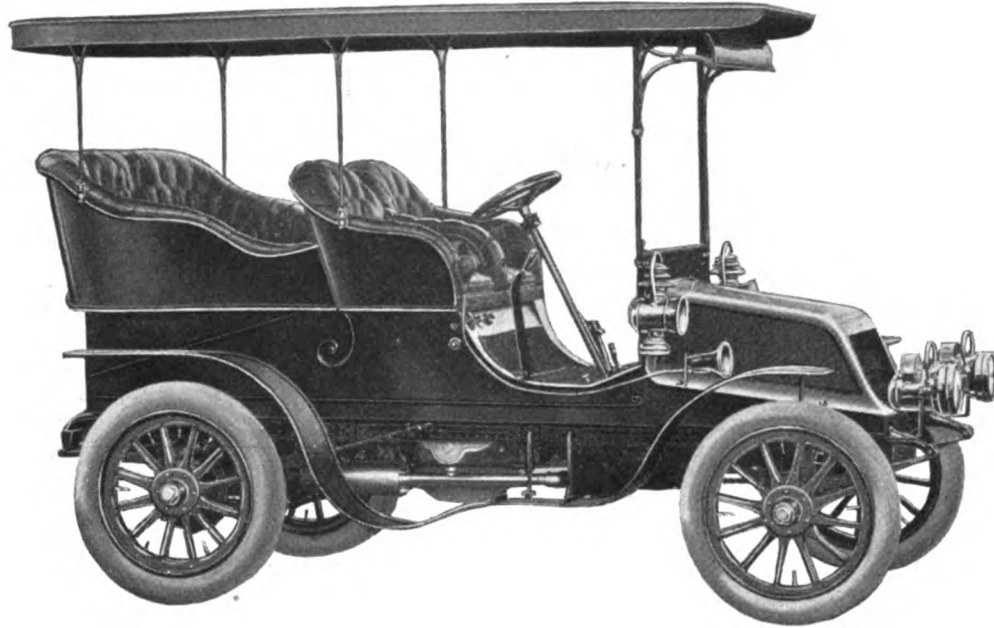


NEW POPE-WAVERLEY TONNEAU WITH CANOPY.



NEW PIERCE STANHOPE WITH EXTENDED HOOD.

WINTON



The Purpose of Power

The power of an automobile motor is intended to propel the car. Frequently its force proves destructive to the car's construction, wearing it out before its time. This difficulty is avoided by the WINTON HORIZONTAL cylinder motor. Horizontal cylinders permit of proper distribution of weight, make an easy riding car with minimum vibration, and deliver on the driving wheels a maximum of power.

The Winton is easiest to control and least expensive to maintain.

Winton cars sold three and four years ago are still in regular daily service. Horizontal cylinders and honest construction count.

\$2500 f. o. b. Cleveland. Prompt deliveries. Literature upon request.

THE WINTON MOTOR CARRIAGE CO.

Members of the Association of Licensed Automobile Manufacturers

CLEVELAND, O., U. S. A.

New York

Boston

Philadelphia

Chicago

WINTON AGENCIES EVERYWHERE



EVOLUTION OF THE FISK TIRE

Inventor Tells the Story of its Origination— Necessity Impelled Him.

In the history of the automobile there are few chapters more interesting, and fewer still more important than those which have to do with the evolution and development of the automobile tire.

The reason is not far to seek. The usefulness or uselessness of the vehicle is so largely dependent upon the worth or worthlessness of the tires with which it is equipped that it may be fairly said that the success of one is measured by the efficiency of the other.

Great as were the difficulties to be overcome in the development of the commercially practical automobile, the production of the tires with which it is equipped has been hardly less a problem, and while it would be idle to claim that perfection has been reached, the strides made thus far are so great as to be little short of marvellous when it is considered what difficulties have had to be overcome, and the great obstacles to be surmounted. The coming of the automobile presented to the manufacturers of rubber tires a problem, from its very nature vastly greater than any with which they had heretofore to cope, and entirely different from anything that had gone before. Their past experiences with tires for horse drawn vehicles and bicycles availed them little. In fact, it may be questioned whether they were not handicapped by past experience of so different a nature. The coming of the first pleasure automobile—the light runabout—presented no problem to speak of, as single tube bicycle tires, made larger and heavier, filled the requirements fairly well. It was with the advent of the heavy, ponderous electric broughams and cabs that the problem was first presented in its true light. The terrific twisting, lateral and torsional strains simply wrought havoc with the tires which had been prepared for the work, and for a time progress was almost checked by the ruinous cost of tire equipment.

The collapse of several of the companies formed to operate electric cabs in the large cities was almost directly due to the enormous cost of tire up-keep, which passed all conceivable bounds. Solid tire or pneumatic—it made no difference. The one, with its lack of resiliency, pounded to pieces and tore off in great chunks, actually leaving holes in the tire and resisting all then known methods of attachment. Pneumatic tires collapsed and were wrenched off before they had gone practically any distance at all; but the costly lesson bore fruit; the tire makers, assisted and spurred on by the automobile manufacturers, bent all their energies to the solution of the problem, and out of it has come tires that to-day meet all ordinary requirements, and are fairly long lived. Two of least, one of each type, embody an entirely

new principle. The one, the Turner solid tire, is in general use on the heaviest commercial trucks and wagons of to-day, while the other, the Fisk mechanically fastened tire, has fairly earned for itself a place in the list of successful automobile tires, and has been adapted to all sizes. It is largely in the latter, as representing the type most numerous, that interest chiefly centres.

In a recent chat with Mr. John C. Coles, superintendent of the Fisk Rubber Company and inventor of the Fisk mechanically fastened tire, he was asked how he came to produce it, and what his first experiences were.

"Pure necessity," he replied. "We simply had to do something or throw up our hands."

"At that time," he continued, "I was engaged with another tire concern which had the contract for furnishing tires for the cabs of the New York Electric Transportation Company. A year or two previously, I was abroad establishing a tire making and reclaiming plant, and so had a pretty good opportunity to study tire conditions, in which, of course, I was vitally interested. However, aside from a general increase of knowledge of the subject, there was not much gained, as conditions abroad, both as to vehicles and roads, were so entirely dissimilar that conditions existing here could not be gauged by results there obtained. However, as I said, when we commenced to fit tires to heavy electric cabs, the result was appalling. Big 5-inch pneumatic tires, weighing from 45 to 50 pounds each, costing \$15 or \$20, would run less than 200 miles. It did not require much seeing, under those conditions, to know that something must be done. Each tire repair job cost from \$25 to \$30, and the company replaced one whole order of 500 tires, 36x5 inches—at what expense can be imagined.

"The ordinary detachable tire, which, on lighter weight vehicles gives satisfactory results, simply could not be made to stand the racket. My first idea of what the present Fisk mechanically detachable tire is, was intended first to apply to a solid tire. Gradually, however, the idea grew, and after considerable experiments, what is practically the present tire was finally developed. You see," Mr. Coles went on, "we had practically little or nothing except common sense to guide us. Broadly speaking, all other pneumatic tires have been constructed on the lines of circumferential pressure. This idea is entirely different, depending on clamps mechanically attached, and which, when in place, exert both inward and downward pressure on the rim, the chief problem at first being to get the necessary number of clamps properly spaced. This has been finally done, and the tires to-day are giving general satisfaction."

A comparatively simple story as it appears, but behind it there is a record of numberless experiments and of detailed changes here and there, as the package of drawings Mr. Cole exhibited more than proved. It is not intended to be taken to

mean that the Fisk mechanically fastened tire has swept the market, or has displaced all other detachable tires. Such is far from being the case. The battle rages as fiercely as ever, but one thing cannot be denied. The principle of the mechanically fastened tire as exemplified in the Fisk has fairly secured for itself a position that is not to be gainsaid.

Insures Regular Lubrication.

To be rid of all care and worry over lubrication would be hailed by every motorist as a great step forward. It is precisely such a contract that the Hill Precision Oiler undertakes, and it carries it out down to the smallest detail. Every bearing is, therefore, kept constantly lubricated, and thereby assured of long life.

In a pamphlet which the Steel Ball Co., Cleveland, O., have issued, the why and how of the working of the Hill device is made plain. The ingenious manner in which the feeding of the lubricant is made mechanical and the regular delivery of the exact quantity of oil to each bearing insured is set forth in detail.

Busy Body Builders.

As expected, it needed but the bare announcement of the formation of the Moore & Munger Company, 602 West Fifty-second street, New York City, coupled with the fact that their specialties of lengthening chassis and fitting side door entrances to tonneau cars would be under the personal supervision of the well known L. de F. Munger, to fairly swamp the concern with orders for this class of work. However, the company have rapidly extended their facilities, equipped their large plant with the most modern equipment, and are as busy as the proverbial bees. Among the interesting jobs now in the factory is a particularly handsome delivery wagon body, which will form part of the exhibit of the Consolidated Motor Company at the St. Louis Exhibition.

Diamond Cup to be Raced for.

Some uncertainty has been felt as to the fate of the handsome Challenge Cup which was donated by the Diamond Rubber Co. to the American Motor League in 1902, to be raced for by its members. The merger of the American Automobile Association and the A. M. L. was, however, considered to carry the cup with it, and the races will hereafter be open to members of the new organization, the American Motor Association, and it will be raced for this season. The cup must be won three times before it becomes the property of the winner.

Wichita, Kan., may be an overboomed town, but it has councilmen open to conviction and who are not afraid to admit that they were wrong. This was demonstrated a week or two ago, when four of them were rounded up, seated in automobiles and given a demonstration of what six miles an hour—the legal limit just established—really is, with the result that they now favor raising the limit to 10 or 12 miles per hour.

ON OLD ORCHARD BEACH

Maine's Popular Pleasure Ground is Inspected and a Three Mile Speed Course Found.

Plans have been put forth to utilize Old Orchard Beach, Me., for a speeding ground this summer. A week's tournament on the beach has been announced, and a fifteen-mile race between S. B. Stevens and H. L. Bowden is said to have been arranged.

In view of these circumstances, a party of Boston automobilists determined to investigate the beach and its fitness for races. The inspection was made on Sunday, May 15.

On that date George H. Lowe, of the

is this structure, with its huge iron posts driven into the sand at ten yard intervals, that spoil the beach for a five-mile course, unless the operators would care to run chances of driving between the iron posts.

On the north of the pavilion there is, however, a smooth, hard stretch of sand three miles in length brought to an end only by a narrow, shallow cheek. At low tide, the explorers found this to be from 400 to 500 feet wide and as hard as asphalt—so hard, in fact, that the tires of the heavy steam touring car in which they were riding failed to leave the least impression.

The two-mile stretch on the south of the pavilion is just as perfect. This stretch would extend at least two miles further but for a straggling group of rocks that

making a runway of boards over the soft sand high on the beach. The roads in the vicinity of the beach are all good and delightful to drive over, while the beach itself, as far as scenery goes, is one of the most beautiful on the Atlantic Coast.

Accommodations at the beach in the summer are of the best, there being no less than a dozen first class hotels, all new and modern. It is a popular resort for New England and New York people during the summer months.

Should the proposed automobile tournament there turn out to be a reality, it is sure to meet with the hearty support of the inhabitants there, and it would have the advantage of being within easy striking distance of White Mountain resorts and Boston.

TWO VIEWS OF THE OLD ORCHARD BEACH.



OBSTRUCTING PIER WHICH SPOILS FIVE MILE COURSE.

OUTJUTTING ROCKS AT END OF FINE TWO MILE STRETCH.

Massachusetts Automobile Club and the Chronograph Club of Boston, accompanied by Walter Schmonk, who has had experience in driving fast cars on beaches in both America and Europe, H. G. Reynolds and J. S. Hatherway, put in a day there exploring.

They left Boston on Saturday evening in Mr. Lowe's White steamer, and drove over the road to Old Orchard Beach during the night, in order to arrive there at low tide, which occurred on that morning at about 6 o'clock.

Mr. Lowe and his companions found a stretch of sand sixteen miles in length, but cut up so by various obstacles that it would not be possible to obtain a straightaway speedway long enough to hold the proposed fifteen mile race between Messrs. Bowden and Stevens.

A three-mile course could be laid out and possibly a five-mile stretch for some of the more daring drivers, but no more. A pavilion runs directly across the beach, opposite Old Orchard Railroad station, and it

make their way across the beach. If several of these could be removed this stretch would be the proper course on which to hold the speed trials.

The three-mile course could not be improved upon. Even under the adverse weather conditions in which the explorers found it, with the heavy mist and heavy sea running, in their steamer they were able to glide over it without a jar at a rate of thirty miles an hour. Even within an hour of high tide Mr. Schmonk found it possible to pilot his car along at a fast clip high on the beach, where on most sandy stretches it would have been soft and not capable of holding any speed, even if the driver was fortunate enough to get along without getting struck.

No wreckage obstructs this stretch and it is free from the knolls of clay that so often protrude above the surface on Northern beaches.

The approaches to the beach are bad at present, but could be easily remedied by

Carolina Has a Beach, Too.

Another Richmond is in the field, another ocean beach speedway to the fore to contest with Ormond for the honor of holding winter race meets. The Isle of Palms, near Charleston, S. C., is the newest aspirant, and plans are on foot to have it inspected for the purpose of substantiating the claims made on its behalf.

J. H. Rast, manager of the Army Cycle Co., and President Philip H. Gadaden, of the Consolidated Co., have taken up the matter. They say there are no quicksands, soft spots and wrecks on the Isle of Palms beach. There is a magnificent stretch of nine miles, as hard as a billiard ball, of an average width of 150 feet, being 250 feet for considerable distances, and at the ends allowing easy turns, while there are only one or two places where the beach is as narrow as seventy-five feet. The beach shelves very gradually, and in every way commends itself as being the best along the entire coast for the purposes of speeding.

UPBUILDING OF THE KNOX

How the Present Immense Plant Grew From Small Beginnings—Two Men's Efforts.

The Knox Automobile Company, of Springfield, Mass., is generally regarded as one of the "pillars" of the industry. It requires but a visit to the factory to become convinced that if all the other "pillars" are as substantial and staunch, the business will be right worthily upheld.

None who has not been through the Knox plant can have a true idea of its extent, or of the work that goes on within it. It is this work that best answers the question, "How does Knox sell so many cars?" From the composition castings, which the Knox people themselves make, and the secret of which is theirs alone, up to the upholstering and last finishing touches, every step is splendidly impressive of Knox thoroughness and quality. The company makes practically everything aside from wheels and tires, and everything is made as good as they know how to make it, and from the best materials that money can buy. And plenty of money, intelligently spent, has placed the company in a position to make the most of the advantages that belong to it. These advantages have not been few—some of them unique. As a matter of fact, the history of the company is somewhat unique, its establishment and success being almost wholly due to the intelligence, enterprise and rare good judgment of one man, E. H. Cutler, its president.

Mr. Cutler has long been the head of the Elektron Manufacturing Company, a large concern devoted to the manufacture of electrical equipments. It has been their policy to encourage young men striving for mechanical education, by permitting a few at a time to work in their plant half-time each day, with half day in the high school.

Harry Knox was one of a class of eight who was thus employed, and after the completion of his high school studies, advanced still further, taking up mechanical engineering studies, until he finally taught where he was once a pupil. Some time later he formed a connection with the ill fated Overman Automobile Company, which lasted until the practical winding up of this concern. It was about this time that he came to Mr. Cutler and mentioned that he had plans for an air cooled automobile. Mr. Cutler's answer was characteristic, being in substance, that if Knox would submit the plans to him, and that if the Overman Automobile Company had no rightful interest in these plans, and that they commended themselves to him, he would furnish money to build the machine, it to become his property upon completion, and should it embody any patents of practical value, they would share equally in them. The offer was accepted, and in March the work was commenced. Mr. Cut-

ler had the machine the following Thanksgiving, though, as he himself says, it was a long time afterward before they evolved a satisfactory air-cooled automobile. But they did evolve it, after almost numberless experiments, and out of that machine they have built a business that ranks among the largest of its kind in the country.

When the Knox automobile was placed on the market it did not take the public long to discover that the motor did "mote," and that the little machine kept going—in itself eloquent testimony of its worth.

The Knox factory grew until it had attained a size that caused its owners to look longingly at the large plant adjoining it, and which had been occupied by a cabinet making and woodworking concern. Mr. Cutler tried to get an option on this plant, but owing to legal entanglements, failed. However, it became known that the plant could be secured, and within twenty-four hours thereafter it had passed into the possession of the Knox Automobile Company. Twenty-four hours later machinery was being moved into it, and in three weeks the entire machine room of the plant had been transferred, with practically no cessation of work.

Later a strike of the body makers at Amesbury caused apprehension lest the concern get tied up for lack of bodies; as a result, within a week the woodworking machinery with which the plant had been supplied was pressed into service and found admirably adapted to the work, a competent force of body makers was secured, and from that time the Knox Automobile Company bought no bodies, but built its own.

Then came the manufacture of tops, enough veneer being found to have lasted the company almost to the present time.

A characteristic that impresses the visitor is the fact that each department seems to be run almost as a separate institution, admirably organized, and all working to a common end. When, after floor upon floor had been visited, surprise was expressed that comparatively so little had been said about so large a business.

"We are satisfied to let the other fellows do the talking if we can get the orders and fill them," was Mr. Cutler's reply.

Again, when mention was made of the enormous investment necessary in the establishment of the business, Mr. Cutler modestly stated that when it grew large he had not felt equal to the task of carrying it all alone, and had, therefore, gotten a number of his friends interested in it. This, it may be here stated, was after the concern was in a thoroughly prosperous condition, and after Mr. Cutler himself had born the brunt of its earliest and hardest struggles. And these struggles are by no means over, as he himself readily admits, stating that the manufacture of pleasure cars is at the best an uncertain business; he will not really rest easily until the concern is largely building machines for the class of trade for which they are now reaching out—the users of the commercial vehicles.

That the concern is prospering and pros-

pering handsomely, is a matter of common knowledge. Not every one knows, however, its size, its extent, or that the Knox Automobile Company has one of the largest and most modern automobile factories in the world. Such, however is the fact.

Evidences of Thomas Activity.

The success of the Thomas three cylinder car has fairly become a byword, but a visit to the factory where it is made is necessary in order to fully appreciate the full measure of its success.

When a Motor World man called there recently he found it a veritable beehive of industry. Workmen fairly swarmed all over the place, and their efforts were seen in cars and parts in all stages of completion and in quantity that was fairly eye-opening. The whole scene was one that would gladden any one to whom industry and prosperity appeal. Prosperity is certainly written large over the Thomas product for 1904, and the trade may well rejoice therewith, as the company commands success by richly deserving it. All day and all night the Thomas plant runs, and as Sales Manager S. F. Heath aptly put it, "The noise that ascends from the factory is only equalled by that made by customers clamoring for cars for which they placed orders long ago." However, all wants are being gradually supplied, though it will take some time yet before the factory is caught up with the deluge of orders with which they have struggled.

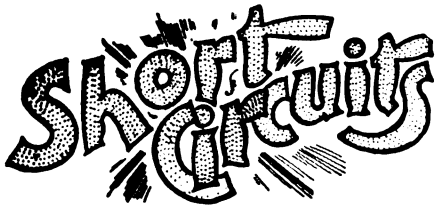
Splendid reports from cars already shipped are being received, and everything considered, the E. R. Thomas Motor Company may well feel satisfied.

Prince Visits Tire Factory.

Prince Pu Lun, the heir apparent to the Chinese throne, was a visitor to the factory of the G. & J. Tire Company, Indianapolis, Ind., last week. In company with the Hon. Wong Kai Kah, Commissioner to the World's Fair from China, and a committee composed of prominent citizens of Indianapolis, headed by Mayor Holtzman, he made the visit of inspection. He expressed himself as greatly interested in the methods shown and the general arrangement of the factory. The Prince is making a special study of American factories, with the intention of introducing Western ideas and methods into his own country.

Why the Governor is Glad.

To drive from Detroit to Lansing, Mich., without a mishap is not a bad beginning for a novice at the wheel of his first car. This was the pleasant experience of Judge Hooker, of the Michigan Supreme Court. He purchased one of the three cylinder Thomas Flyer touring cars from John P. Schneider, of Detroit, and was given a talk and a demonstration ride by the latter. Then, with unbounded confidence, he headed for Lansing, and reached there in good time and shape. Since then he has been receiving the congratulations of his friends.



There are said to be three hundred and fifty automobiles owned in Columbus, O.

It is rumored that there will be an automobile show and race meet at Long Branch late in June.

The Kansas City (Mo.) Automobile Club has voted to secure a clubhouse. Definite plans will be decided upon by June 9.

There will be automobile races on Decoration Day at the grounds of the Worcester (Mass.) Agricultural Society. Members of the Worcester Automobile Club have the meet in charge.

Much on the principle of "set a thief to catch a thief," the Brookline (Mass.) police department has put a speedy automobile in commission to overhaul and apprehend fracturers of the local speed ordinance.

The first model B Cadillac to be delivered in Newark, N. J., was received last week and turned over to the W. V. Snyder Co. The latter will use it for delivery purposes in their drygoods business.

In consequence of the recent increase in the number of automobile accidents the Paris authorities have decided to spend \$300,000 in improving the most dangerous grade crossings in the Department of the Seine.

Comfortably packed away in twelve cars forty-nine members of the Cincinnati (O.) Automobile Club, with their guests took their first club ride last week. They rode to the Langhery Club, where dinner was partaken of.

While the British eliminator trials on the Isle of Man were being run thieves took advantage of the absence of householders to visit their domiciles and make off with whatever they could lay their hands on. One place had \$2,500 worth of jewelry stolen.

A week of automobile and motor bicycle races has been arranged to take place during the present month in Buenos Ayres, Argentine Republic. A special prize has been offered by the City Council, and the aggregate value of the prizes is reported to be over \$5,000.

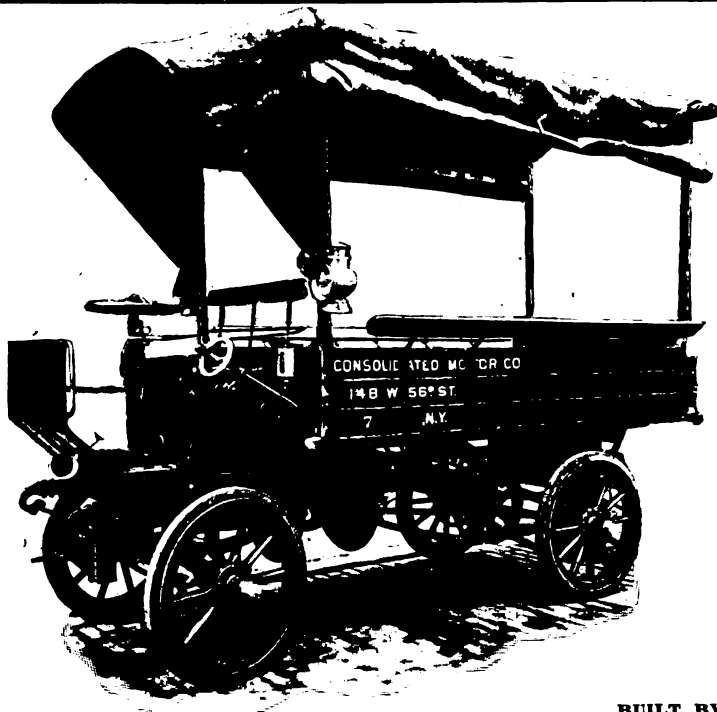
An automobile line from Chattanooga, Tenn., to Chickamauga Park is contemplated. This summer, if the consent of the National Park Commission is secured, visitors will be whirled along the government pikes and over the historic battleground in up to date motor vehicles.

Thirty students are taking the automobile course of the Cleveland (O.) Y. M. C. A. Owing to the interest taken in the work the classes are to be enlarged during the fall. Steam and electric types of automobiles will also be studied, as well as a course in automobile drafting and machine shop work.

So much complaint has been made of the indiscriminate arrests made by the Fairmount Park (Philadelphia) police that a new rule has been put into force. Hereafter the guards will have to sound whistles when warning or stopping motorists, just as they now do when horsemen are called to time.

Isaac Guggenheim, treasurer of the American Smelting & Refining Co., New York, sailed for Europe with his wife and daughter on the steamship Kaiser Wilhelm II on Tuesday for a four months' stay in Europe. Most of their time will be spent in an automobile trip through France, Switzerland and the Austrian Tyrol.

Another of those exhibitions of power for which the Cadillac car has become notable was made at Kankakee, Ill., recently. With six people aboard, C. H. Foster drove the car west on Station street into the country over heavy sand roads and up two long steep sand hills, from 25 to 30 per cent grade, with the sand from three to six inches deep, making a distance of four and a half miles under these severe conditions in 18 minutes.



Simple. Economical. Durable. Reliable.

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(SWIFT RUNNING)

Commercial Vehicles, Touring Cars,
MOTOR LAUNCHES,

WINNERS OF

GOLD MEDAL, AUTOMOBILE CLUB OF AMERICA
SERVICE TEST, APRIL, 1904,

and

Silver Medal, Nuremberg, 1900.

Gold Medal, Wurzburg, 1900.

Gold Medal Diploma, International Automobile Exhibition, Vienna, 1903.

First Prize Certificate for Trucks, at the Hill Climbing Contests,

Exelberg Races, Austria, March 28, 1903.

First Prize, International Hill Climbing Contests, on the Semmering,

Germany, Sept. 13, 1903.

Second Prize, International Automobile Races, Berlin, October 18, 1903.

BUILT BY

CONSOLIDATED MOTOR COMPANY,

General Offices: 148 West 56th Street, New York City.

BOARD OF DIRECTORS: Henry C. Cryder, Henry U. Palmer, Lowell M. Palmer, Thomas V. Patterson, Lowell M. Palmer, Jr.

CATALOGUE MAILED ON APPLICATION.

IN NIP-AND TUCK CONTEST

Two Dealers Have a Freindly Go and Demonstrate the Autocar's Even Running.

As showing the remarkable uniformity existing between Autocars of the same model, an incident which took place last week is interesting. As is well known, Autocar dealers frequently run new cars home from the factory at Ardmore, Pa., under their own power. By so doing they effect a triple economy: They save many dollars in freight charges, several days' time

The pace had been warm right through, and the rivalry made close going. At Trenton, while waiting for Dr. English to pay a professional visit, an agreement was made by which Eveland took the lead. He got away well in the lead, and Newton went after him, cutting down a slight lead inch by inch, for ten miles, when Newton regained the lead. From that point on to the finish of the hundred it was a close chase right into Newark, where Newton led by a small margin of 100 yards.

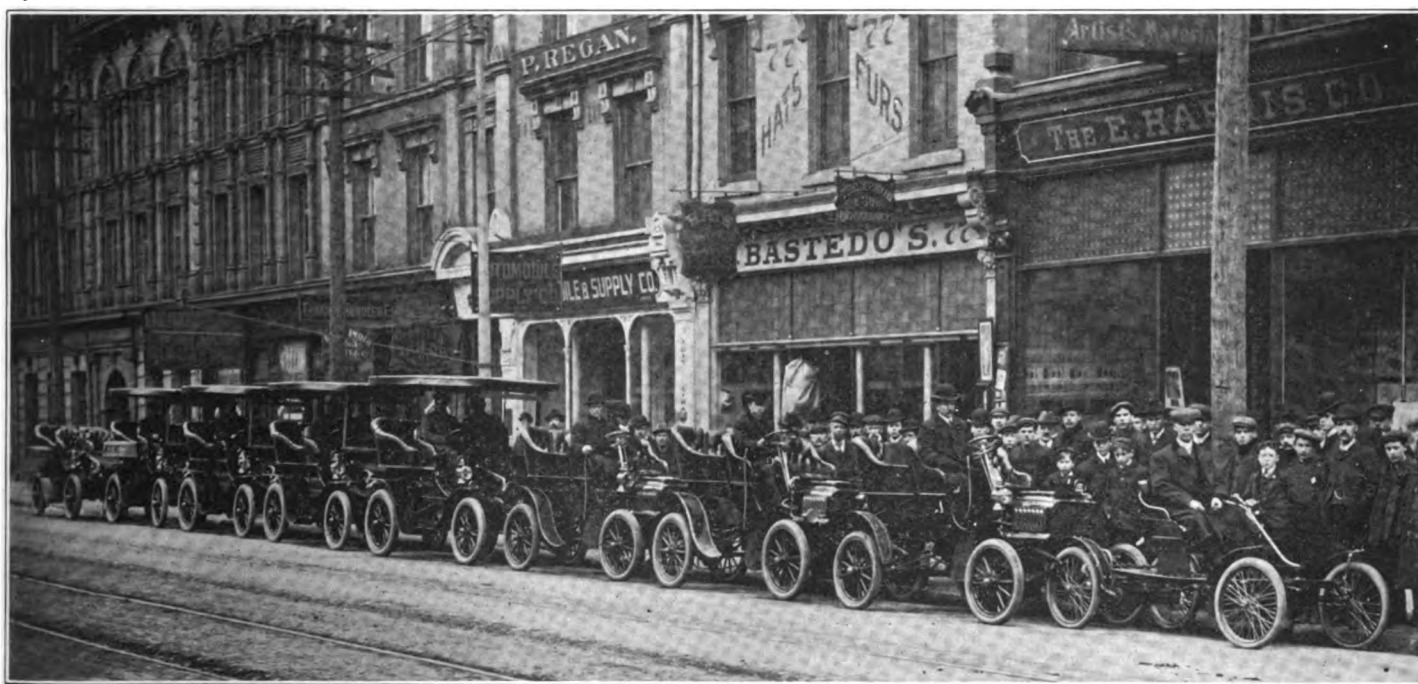
The elapsed time from Philadelphia was four hours, a half hour being lost in stops. From thirty-five to forty miles an hour was

LAUGHED AT FARMER

Knox Tourist Disdained use of Horse and Climbed Connowingo Hill Unaided.

A firm believer in the superiority of the Knox car is F. A. Newell, a retired jeweler of Attleboro, Mass. He is a persistent tourist, being on the road almost constantly in good weather. He has been spending some time in Washington, and only recently returned from there in his two cylinder Knox tonneau.

A Flourishing Toronto Establishment.



AUTOMOBILE & SUPPLY CO., AGENTS FOR WINTONS, RAMBLERS AND ORIENT BUCKBORARDS.

and give the machines a practical "try out" which cannot but reveal any weaknesses or imperfections.

The incident referred to took place through a meeting between R. T. Newton, of the Motor Car Company of Newark, N. J., and Frank Eveland, of A. G. Spalding & Bros., New York, who were driving cars from the Autocar factory to their respective salesrooms. Both have driven over the roads scores of times in this pleasant way, and when on Saturday they met at the factory both managed to start at about the same time, in brand new cars.

At Camden they crossed the ferry, and at Broad street station Newton picked up Dr. James R. English, of Newark, whom he had arranged to meet. There was some joshing, and a coin was tossed to see who would take the dust of the other. Both cars being of the same horsepower, it was then a question of the handling of the car. Newton won the toss and took the lead. At Trenton Eveland was still following and consuming more than his share of the dust.

the speed obtained on sections of the road which were uninhabited. Chuck holes caused some trouble, but otherwise the roads were in good shape.

Says All are Air Cooled.

There is a smart salesman of the air cooled Knox cars in a town in New York State. He was overheard one day explaining the virtues of the car to a prospective customer. The inquirer asked what was the merit of the motor being air cooled and the smart man gave this answer:

"Air cooled? Well, you know all motors are really air cooled, only some go to a great deal of trouble and increase the complications of a car by using water in a jacket about the motor and having the water circulate through the small pipes of a radiator so that the air can cool the water. In the end they accomplish the same thing of getting the motor cooled by the action of the air that we do in the Knox, only we do away with the intermediate use of the water and complications by building the motor so that it is cooled directly by the air. It is simpler and better in every way."

He found the roads between Washington and Philadelphia in terrible condition at the present time and about as bad as any he had ever travelled over. Mrs. Newell accompanied her husband on the trip. He also had a chauffeur and carried 150 pounds of baggage. Mr. Newell ran against the hardest hill of his experience on the road between Baltimore and Philadelphia, the Connowingo Hill. This hill is three quarters of a mile long and has frequent water breaks. There are numerous points where the grade is at least 30 per cent., and automobiles are frequently stuck there. To such an extent is this the case that a farmer at the top of the hill has a horse and tow rope ready for every automobilist, and so profitable has the towing of the choo-choo machines become that the farmer has allowed his farm to go to waste while reaping the harvest. Mr. Newell, in his Knox, saw the farmer coming to aid him up the hill, but made it altogether under his own power and gave the farmer and horse a smile as he passed along.

Strong's way of Trapping Them.

There have been police traps galore, of all kinds and degrees of turpitude, but the palm is borne by one established at West Hartford, Conn. There a broken down farmer named Strong, by some distortion of reason and justice, holds a commission as constable. On various former occasions Strong has distinguished himself, notably when, as game warden, he arrested a number of Italians for shooting robins on the north meadows.

Hartford papers are warning motorists against Strong's trap. The Globe, of that city, is particularly severe on it. It says:

"Automobilists are warned against a hold-up pocket established by Constable Strong, of West Hartford, who stands with a confederate making a trap at the corner of West Hartford, Main and Park streets. The confederate stands at the top of the hill opposite the Tillotson farm, while Constable Strong, bedecked in his suit of blue and wearing a badge in the form of a star, stands below and holds a watch. Because of the natural conditions automobiles are giving to making fast time. The grade is very steep, and it is almost impossible to run slow while coasting down the grade. In this fashion cars which could not otherwise beat the speed limit are caught napping and are held up.

"That's all right, gentlemen. I have your number. Give me your name and I will serve warrants on you this week. No need of giving bonds. Go right along." This is the speech that Constable Strong makes when he has a suspect. And business is very good with him. In fact, the cars are held up so fast that, informal as the arrest is and little time as it takes, Strong finds himself with his hands full. He took in two Pope Hartford cars and a Cadillac driven by Louis P. Strong on Tuesday afternoon, and in each case he made the same stereotyped speech about serving the warrant later, and in each instance he exercised the same cars in taking numbers, names and addresses.

"While it is undoubtedly true that automobilists have been going pretty fast through this beautiful stretch of road, it is also true that the houses on this road are far apart and that there are no sharp turns or streets leading into it. Public convenience has not been harmed or has property or life been endangered by the speeding. The site was selected by Constable Strong because it is adjacent to his home and because it is at the foot of a hill where vehicles of every kind in coasting are bound to exceed the speed limit. It is because of the belief of automobilists that Constable Strong is only engaging in the work because of the fees that are in it that the trap is so generally condemned."

A Nice Bonfire.

A million francs' worth (\$200,000) of automobiles went up in smoke on Monday, when the garage of the Automobile Club of Nice, France, was burned. A number of cars belonging to Americans were among those destroyed.

Fear Literal Interpretation of Law.

An old friend has come to light again. Does "ten miles an hour" mean that literally, or does it mean "at the rate of" ten miles an hour? The commissioners of Radnor, Pa., have been wrestling with the subject, and, rather than run any risk, have changed their speed ordinance to conform to the latter interpretation.

Radnor, it will be recalled, is a select hamlet on the Lancaster Pike, some fifteen miles outside of Philadelphia. It was there that young Robert Goelet was arrested with his bride-to-be a week or two ago, and he questioned the legality of the ordinance. This caused the commissioners to conclude it would be well to look over their laws.

So Charles F. Da Costa and William S. Ellis, counsel for the commissioners, burned the midnight oil examining the laws which limit the automobiles to ten miles an hour. As a result, they came to the conclusion that some law student like Goelet might endeavor to prove that the Radnor ordinance allowed a man to go seven and a half miles in one-half hour if he only went two and a half in the next half hour, thus making ten miles in the hour.

So the township has passed a new ordinance, which provides that no person shall drive at a rate of speed greater than one mile in six minutes.

Says State Law is Contravened.

On Friday of last week, in the Philadelphia Superior Court, an appeal was filed by Samuel Bell, jr., a member of the Automobile Club of Philadelphia, from the decision of a lower court in an automobile speed case. The appeal makes it certain that the case will be fought out on its constitutional side, and is interesting from its bearing on the present State law.

The appeal is really an attack on the automobile speed regulations adopted by townships near Philadelphia, particularly Radnor. Mr. Bell was fined recently for going more than ten miles an hour in Radnor Township. He appealed, but Judge Johnson, of Delaware County, held that the township authorities had the right to regulate such matters as they saw fit.

This decision, it was contended, was opposed to an act passed by the legislature in 1903, fixing the speed of automobiles at eight miles an hour in cities and boroughs, but permitting a speed of twenty miles an hour outside city and borough limits.

It is the intention of Mr. Bell and the automobile club to fight the case, as they say every automobile owner in the State will be affected by Judge Johnson's construction of the law.

Buffalonians Confer on Race Meet.

Committees have been appointed by the Buffalo Automobile Club and the Buffalo Automobile Trade Association to confer upon the advisability of holding a race meet this summer. The committee of the latter organization is composed of W. C. Jaynes, J. A. Cramer and C. W. Roe.

Effect of a Greasy Apron.¹

On more than one occasion the Motor World has called attention to the danger lurking in the apron used underneath a car to shield the engine and transmission gear from dust, mud, etc., which the inrush of air sucks into these vulnerable parts. In doing this the apron plays a good part; but it has another side, and an extremely unpleasant one, viz., that the drippings of oil, grease, gasoline, etc., also fall into the apron and furnish the materials for a first class bonfire. Not a few cars have vanished in smoke from an unknown or unsuspected cause, when a little investigation would have developed the fact that the fire had its origin from a grease filled apron.

A Providence (R. I.) motorist named Dimond recently had an unpleasant experience of this kind, which will teach him a lesson. An acquaintance recommended that he inclose the machinery under the body in a leather apron or boot. The explanation given was that this would keep the dust and dirt of the road from gathering there. It was not explained that in this boot would gather drippings of oil and gasoline which should properly, of course, be allowed to fall on the road. This fact Dimond ascertained by unpleasant experience.

He placed the leather boot under the car and had it fastened tightly at the sides. There gathered these drippings, and one day Dimond, with a chauffeur, started for Narragansett Pier. The run down was quite enjoyable, as was the return, until the Apponaug Road was reached. Then, entirely without warning, a sheet of flame came from the boot on both sides. The two men got out of the car and discovered that the boot was burning. The fire speedily communicated to the car, and then sand was shovelled on the flames and they were extinguished. The car was towed back to the city.

First Fire Engine Self-Propelled.

The first American steam fire engine was self-propelled, and was constructed in 1840 by P. R. Hodge, an ingenious mechanical engineer of New York. The engines were horizontal, and had their cylinders attached to the smoke box of a tubular boiler of the locomotive type with the steam dome. The pistons of the steam and water cylinders were on the same rods, and the connecting rods were attached to the cranks on the rear wheels.

When the engine reached the scene of action the rear, or driving, wheels were jacked up, in which case they served as balance wheels for the engine. This early piece of apparatus was very efficient, but the prejudice of the volunteer departments of the time was so strong against such a mode of fighting fire that it was never used to any extent.

The Sargent Transportation Company has been organized in Farwell, Neb., to operate an automobile stage line between Burwell, Sargent and Broken Bow; the cars have not yet been selected.

New Way Pays Abe Better.

For some time there has been a very suspicious quietude prevailing down on Long Island, where the passing motorist has been an easy prey for the enterprising constable on the lookout for "speed violations." These bucolic guardians of the Long Island peace no longer make their Sunday and weekday "round ups" of victims—or if they do, no publicity is given to the fact. To a Motor World man recently a Long Islander, whose domicile is on the Merrick Road, gave some information which throws considerable light on the matter.

It appears that he was also impressed with the profound silence prevailing. To satisfy his curiosity he interviewed one of the afore-said guardians, whom he knew to be still employed in prosecuting violators of the speed law.

"You are not making any arrests, Abe," he remarked. "What is the matter? Are you letting them all go?"

A cunning look appeared on Abe's face. It spread into a grin as he replied:

"No, I guess we ain't letting them escape scot free, although there ain't no noise raised about it no more; but I'll tell you how we work it. We lay for a man who is hurrying home. As he gets to us we step out and stop him. Then we tell him what he's done, and that we will have to arrest him unless—well, unless he can make some amends. It don't take him very long to ketch on, and the first thing we know there is a \$10 bill slipped to us. Then we reckon we was mistaken in thinking he had broken the law and let him go.

"He gits off easy and loses no time, while we save the county a lot of expense and trouble. And we don't lose no money, neither!" And Abe winked in a tremendously knowing manner.

Montreal Police Break Speed Ordinance.

Eight carloads of Montreal city officials, including councilmen and police attaches, were whirled through the streets last week at a pace far in excess of the legal limit. They were on a tour of inspection, and the automobiles were placed at their disposal by the Eastern Automobile Company.

The start was made from police headquarters at 2 o'clock, Chief of Police Legault leading. The chauffeurs paid little regard to the civic regulations concerning speed, but seemed anxious to demonstrate to the officials who are responsible for enforcing the laws, that there was little danger in running an automobile through city streets at a higher rate of speed. Although the tour was made through the principal and busiest of the city streets, and the horns were constantly tooting, not an accident occurred.

Charles M. Decker, an Orange (N. J.) grocer, has purchased a Cadillac car, and will use it for business purposes.

Fair Money Still Buys Automobiles.

As he came to his money through an automobile, so "Bill" Smith, the uncle of Mrs. Charles L. Fair, who, with her husband, was killed in France about a year ago, is investing part of it in similar machines. He is now en route to St. Louis in a 24 horsepower car with his wife and three children.

Since the money, amounting, it is rumored, to several hundred thousand dollars, came to Smith his munificence has startled the townspeople of Newmarket, N. J., where he lives.

"Tuesday I am going to give a little supper to forty-five of my friends," he said to a reporter. "Wednesday morning we're off for St. Louis. Handle an auto? I should say I could. Where'll we stop on the way? Anywhere we take a notion. Perhaps we'll keep on to San Francisco.

"Folks 'round here treat me like a mayor now. Delegations of women and children come up to our house just to see how Mrs. Smith and I stand being rich. We're making out first rate with the wealth. No, I won't say just how much we got; the lawyers told me not to.

"I'm having my house here fixed up a bit. The grounds are being improved, too. But folks still call me Bill Smith, just the same as before. William B. Smith was the way I was christened."

Proof That he had a Nerve

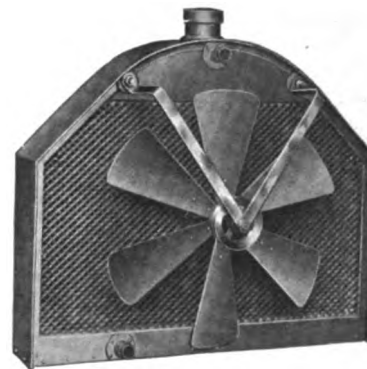
Many stories at the expense of the blue-coated guardians of the peace have been related, and a good one from across the water concerns an English Bobby. It was in the early days of motor cars. Mr. Hewetson, when driving one of the first Benz cars up a hill near the Strand, had trouble with the vehicle, which stuck half way, and the inevitable crowd collected, including a policeman well read in the then new motor law. "Can this car reverse?" said the gentleman in blue. "Certainly," replied Mr. Hewetson. "Let's see yer do it then," artfully suggested the constable, whereupon Hewetson released his brakes, and the car, of course, began to run backward. "That's all right," said the Law, quite satisfied, and the crowd got a high opinion of the easy control of the motor car. It is hardly necessary to add that the car had no reverse gear at all.

Making a Home-Made Densimeter.

A home made densimeter is easily made. Weigh the gasoline which is usually used, then get a small and thin float and weight it till it stands upright in the gasoline; then mark the height of the gasoline on it. Thus it will be easily seen whether the gasoline is heavier or lighter than usually used; .700 is about the average weight of gasoline which is sold; the same gasoline will weigh a little more in winter and a little less in summer. The red mark on a densimeter should be below the level of the gasoline of .680 density. For use in the engine, gasoline should not weight more than .720 (maximum winter weight).

WHITLOCK COOLERS

THE SECRET OF THEIR SUCCESS



THERE IS A RIGHT WAY TO DO EVERYTHING, AND INCIDENTALLY ANY NUMBER OF WRONG WAYS. There is a right way to make honey-comb radiators. The principal of the honey-comb radiator is admitted to be the best in the world—as, witness its use by the leading foreign makers, and its eager adoption by the best and most progressive American concerns.

But, like any other good device, it can be spoiled by improper and imperfect execution. The honey-comb radiator from the very nature of its construction must be made right. The same reasons that mark superiority and great efficiency also make possible its condemnation, unless extreme care in the selection of material and workmanship be exercised.

The WHITLOCK COOLER is made in the best possible manner, out of the finest material the market affords, and its success has been uniform and complete.

The WHITLOCK COOLER is the highest grade cooling device on the market, and is used by most manufacturers who produce high class touring cars.

WHITLOCK COOLERS mark the high grade car. Most makers are familiar with the truth of the above statements. Any further information we'll gladly supply.

THE WHITLOCK COIL PIPE COMPANY

HARTFORD, - CONNECTICUT

Oil Drippings Make Greasy Street.

Another problem in street cleaning was brought to the attention of the Philadelphia Street Department last week by complaints from a number of draymen that the surface of Broad street is too slippery for horses to attempt to haul heavy loads without constantly falling.

Automobiles are blamed for the condition, which is said to be due to the oil that drips from the machines as they speed along the street. Chief Sutcliff says that the rain spreads the oil.

The most slippery sections of the street, he says, are in front of the various automobile stables. The department has been asked to rid the street of the oil coating, but has not as yet decided on a method to accomplish it. The matter will be referred to the Bureau of Boiler Inspection, where automobile licenses are issued, to require that oil cups be used to catch the drippings.

Want Money for Street Sprinkling.

An interesting interchange of letters took place recently between Dr. W. H. Donaldson, chairman of the sprinkling committee of the Village Improvement Society of Fairfield, Conn., and the secretary of the Automobile Club of Bridgeport. Dr. Donaldson requested that the club donate a generous

subscription to the committee for the purpose of watering Fairfield's streets. He said the dust raised by automobilists passing through the town was unbearable and the streets had to be sprinkled in self-defence.

The secretary was instructed to write to the committee that as the club only comprised a third of the automobilists of Bridgeport, it did not feel bound to aid in sprinkling Fairfield's streets. It also felt that it should not assist in this worthy cause any more in Fairfield than in other surrounding towns.

Bridge Contractor's Hurry Drive.

Twenty-nine miles in fifty minutes is the record made last week by W. J. Tynans, of the Auto Shop, Paterson, in a double cylinder waterless Knox.

The run was made in answer to an emergency call from Floatsburg, where a bridge was reported unsafe. J. W. Ferguson, a prominent contractor of Paterson, was wired for to inspect the bridge and pass on its safety. The Knox was put into commission, and over a stretch of road between Paterson and Oakland, where the roads were in excellent shape, the throttle was thrown wide open, the machine responding nobly, covering the twenty-nine miles in exactly fifty minutes. At Floatsburg Mr. Ferguson ordered the necessary repairs to be made, and, returning, came at a more moderate pace.



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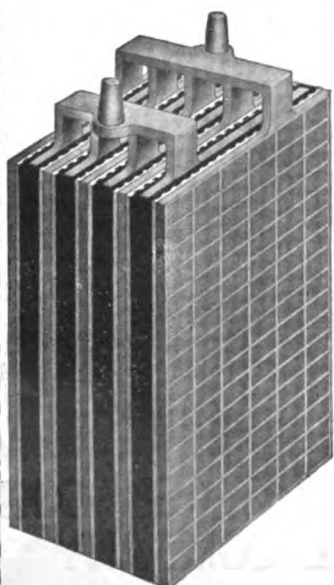
All roads are alike when a machine is fitted with Tennant Tires.

Send for catalog that tells all about it.

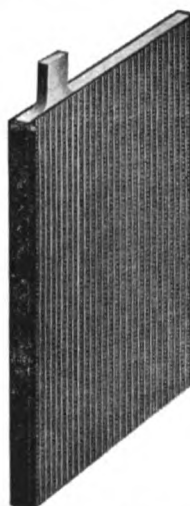
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144 West Main Street, Springfield, Ohio.

THE WILLARD

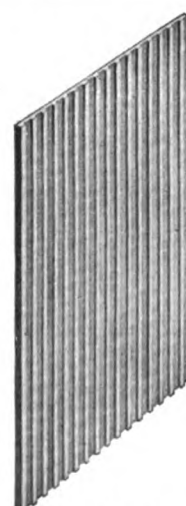
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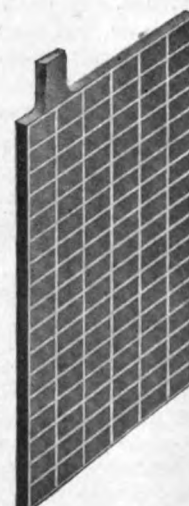
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WOOD SEPARATOR.



NEGATIVE PLATE.

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The Week's Patents.

759,396. Carburetor for Hydro-carbon Engines. Menzo A. Rutenber, Chicago, Ill. Filed June 6, 1903. Serial No. 160,345. (No model.)

Claim—1. A carburetor comprising a float chamber, a float valve therein, a mixing chamber located above the float chamber, a nozzle discharging upward from the float chamber into the mixing chamber, an air chamber centrally disposed above the mixing chamber and communicating with the mixing chamber near the bottom thereof, and means for regulating the inflow of air to said air chamber.

2. A carburetor comprising a float chamber, a float valve therein, a mixing chamber above the float chamber provided with a concave bottom, a nozzle discharging from the float chamber into said

759,456. Rubber Tire. Arthur H. Marks, Akron, Ohio. Filed September 23, 1903. Serial No. 174,256. (No model.)

Claim—1. A vulcanized rubber tire, consisting of a relatively tough and stiff base portion and a resilient tread portion, said two parts of the tire being interlocked by means of projections on one which enter the other.

759,539. Carburetor. Frank C. Merrege, Marine City, Mich. Filed July 27, 1903. Serial No. 167,215. (No model.)

Claim—1. In a carburetor, a hydro-carbon chamber, a disk or plate arranged therein, a plurality of pins carried by the plate and arranged in a spiral line, and a partition wound upon the pins and provided with a covering of absorbent material.

759,550. Secondary Battery Electrode. Charles J. Reed, Philadelphia, Penn. Filed January 16, 1901. Serial No. 43,545. (No model.)

Claim—A rolled and laterally compressed secondary battery plate, comprising a plurality of corrugated panels and intervening strengthening ribs and side ribs projecting beyond the panels and intervening ribs, said parts constituting an integral structure.

759,559. Running Gear for Power Driven Vehicles. Rufus D. Scott, Beverly, Mass., assignor to Albert G. Ropes, Morristown, N. J. Filed July 20, 1903. Serial No. 166,278. (No model.)

Claim—1. In a running gear for power driven vehicles, a driving axle and wheels adapted to be driven thereby; mechanisms intermediate of each said wheel and said axle for transmitting motion from the axle to each wheel independently of the other; a steering mechanism under control of the operator; and mechanism intermediate of and actuated by the steering mechanism and the mechanisms for transmitting power from the driving axle to the driving wheels, whereby when the vehicle is steered to right or left the driving wheel on the outer surface of the curve operates as a driver while the driving wheel on the inner sides of the curve does not so operate.

759,609. Motor Gear. Joseph Havluj, Luther, Okla. Filed December 21, 1903. Serial No. 186,112. (No model.)

Claim—A motor gear, comprising a frame having peripherally grooved guide rollers mounted at the sides thereof, a rack link, having its rack bars engaging said grooved guide rollers, a lever, a link connecting the latter to the rack link, spur gears engaging the respective rack bars of the rack link, a shaft on which said gears are loosely mounted and having its bearings in the frame, ratchet wheels fast to said shaft, and pawls carried by the respective spur gears and co-acting with the respective ratchet wheels to revolve the shaft in one direction when reciprocating movement is imparted to the rack link by the lever.

759,611. Cushion Tire Wheel. William H. Holmes, Columbus, Ohio. Filed December 29, 1903. Serial No. 187,019. (No model.)

Claim—1. In a cushion tire wheel, the combination of a rim having a projecting edge portion, inclined slots in said edge portion and a tire holding flange separate from and independent of the tire having pins to enter and engage said slots.

759,624. Vaporizer for Hydrocarbon Engines. John J. MacMulkin, Long Island City, N. Y., assignor to the Daimler Manufacturing Company, Long Island City, New-York, a Corporation of New York. Filed December 8, 1903. Serial No. 184,320. (No model.)

Claim—1. A vaporizer for liquid hydrocarbons, comprising a plurality of liquid hydrocarbon inlets, plurality of air inlets, an outlet for the vaporized mixture, and a valve having a plurality of ports for simultaneously cutting off more or fewer of the hydrocarbon inlets and air inlets, substantially as described.

759,757. Differential Gear for Power Driven Vehicles. Rufus D. Scott, Beverly, Mass., assignor to Albert G. Ropes, Morristown, N. J. Filed July 20, 1903. Serial No. 166,277. (No model.)

Claim.—In a differential gear, the divided shaft consisting of the two portions a and b formed at their adjacent ends into plates or disks c; the sleeves g surrounding said portions a and b and formed at their adjacent ends into the two parts h of a box which incloses said plates, and p ovided at their outer end; with clutch members; clutch members adapted to rotate with the two portions of the divided shaft; mechanism for moving the clutch members on the sleeves into engagement with those on the shafts; and mechanism for rigidly connecting the box portions h of the sleeves, whereby motion may be imparted to each shaft, independent of the other or to both simultaneously, for the purpose set forth.

759,841. Friction Clutch. William C. Davis, Denver, Col. Filed February 7, 1903. Serial No. 142,388. (No model.)

Claim—1. The combination with an operating wheel and a device to be actuated therefrom, of friction clutch mechanism, comprising an arm having independent turning

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movement on the axis of the wheel, a friction band connected with one extremity of the arm, the opposite extremity of the band being connected with the operating wheel, a toggle joint connection between the wheel and arm for tightening the band, which is suitably arranged to engage the part of the device to be actuated, and a block trunnioned on the arm, one member of the toggle passing through said block and being adjustable to compensate for the wear of the parts incident to the operation of the toggle.

759,875. Valve action for explosive engines. Otho C. Duryea and Morris C. White, Los Angeles, Cal. Filed July 28, 1902. Serial No. 117,394. (No model.)

Claim.—1. In combination with an explosive engine, an igniter, a valve, a rock arm, means independent of the rock arm and valve for moving said rock arm alternately into connection with said igniter and said valve, and means inertially controlled for preventing the movement of said rock arm into connection with said igniter when the

speed of the engine varies, said rock arm being intermediate the igniter and said last means.

759,999. Motor vehicle. Robert Kuhn, Detroit, Mich. Filed October 29, 1903. Serial No. 178,990. (No model.)

Claim.—1. In a motor vehicle, the combination of a drive axle and a frame yieldably supported thereon, a rotary transmission shaft extending from said axle longitudinally of said frame, and a motor for the axle said motor being pivotally secured to and housed within the vehicle body.



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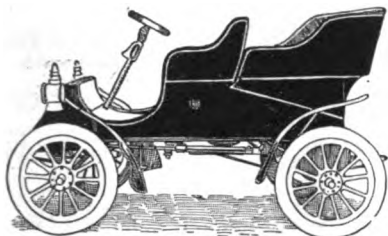
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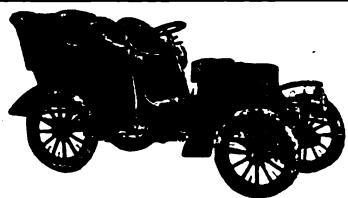
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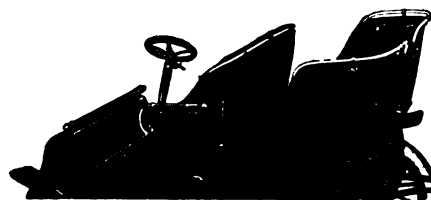


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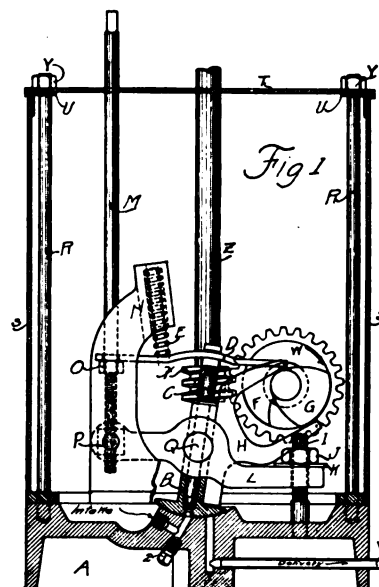
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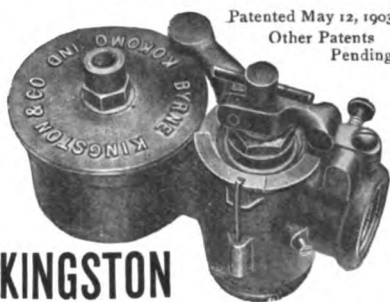
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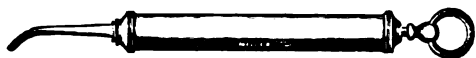
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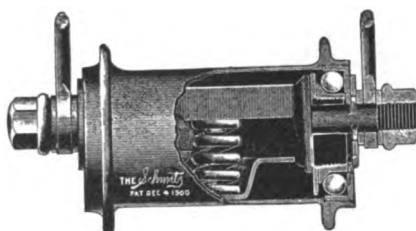
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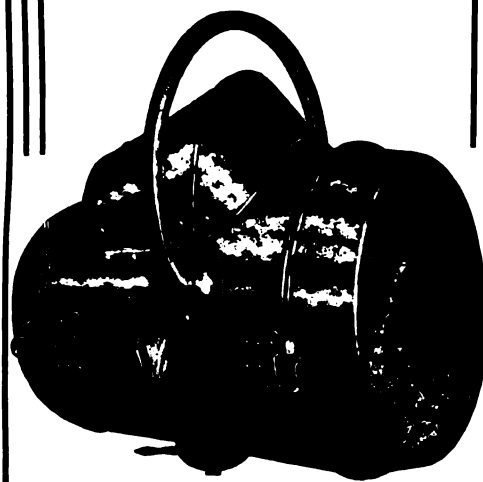


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They will suit you.
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Automobile Chains,
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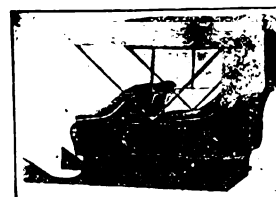
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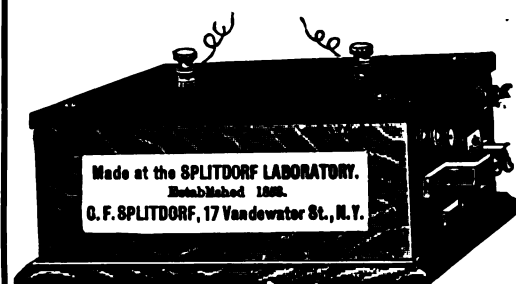
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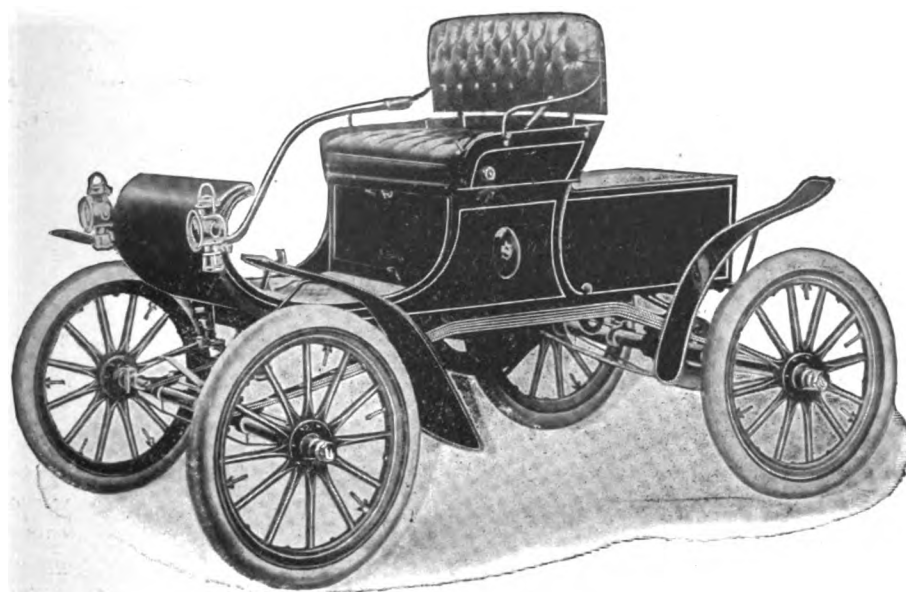
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How thoroughly the world does know about the Oldsmobile
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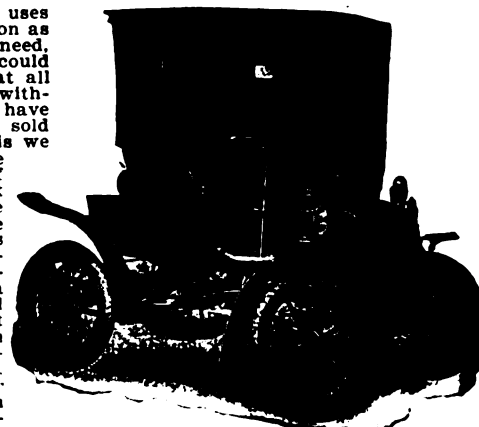
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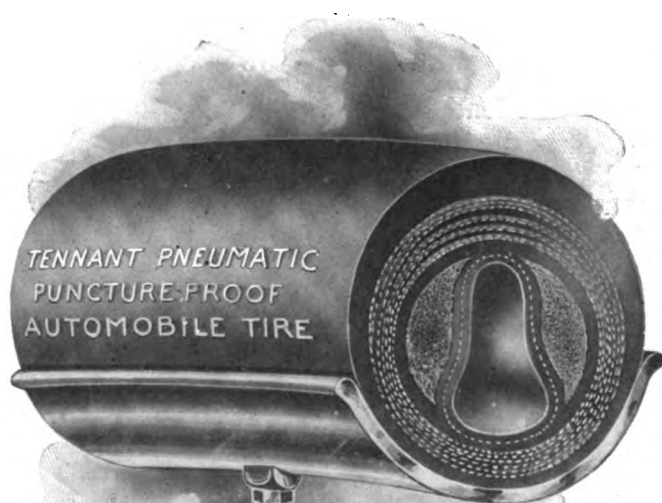
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FORCIBLE FEATURES OF EFFICIENCY



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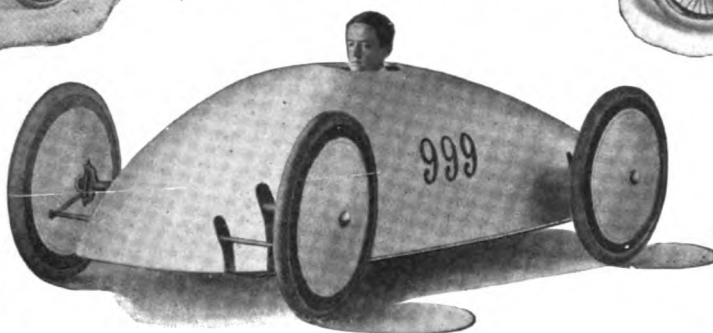
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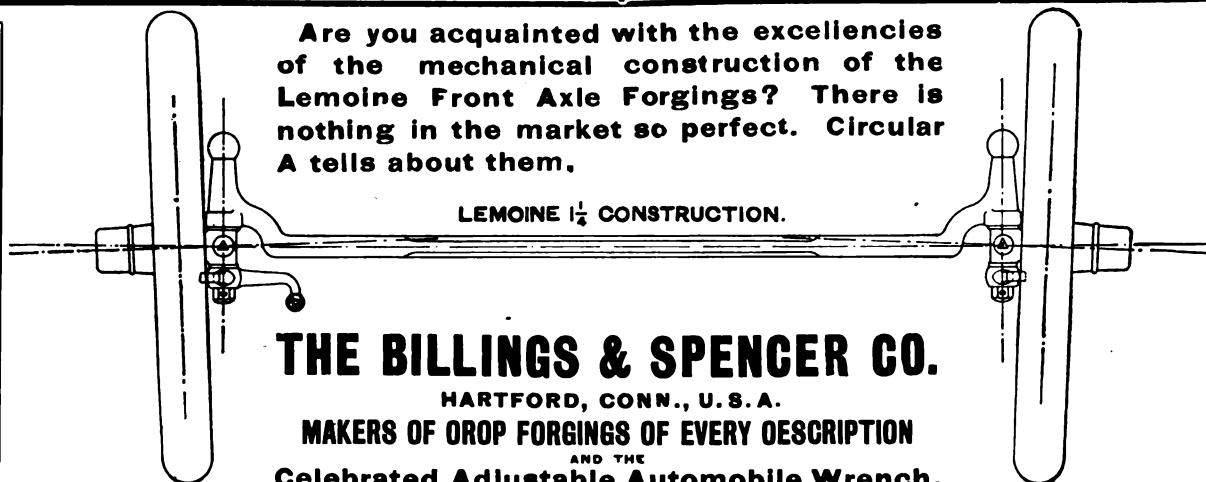
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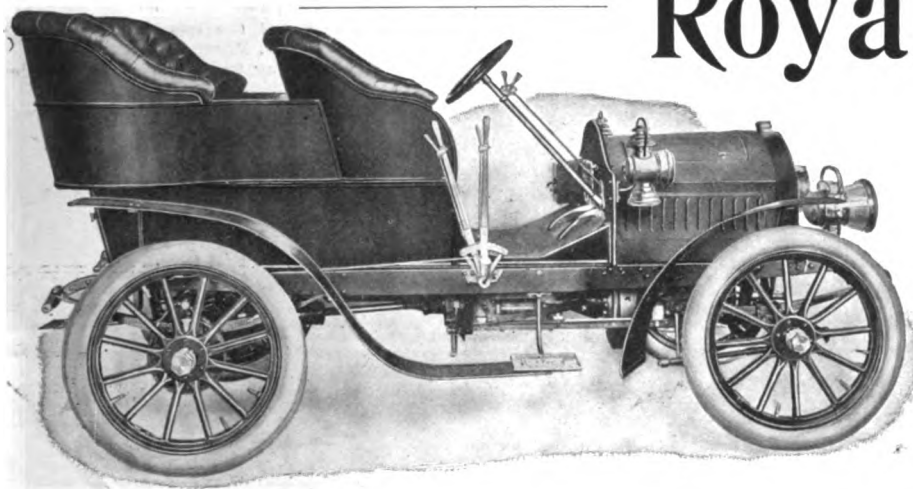
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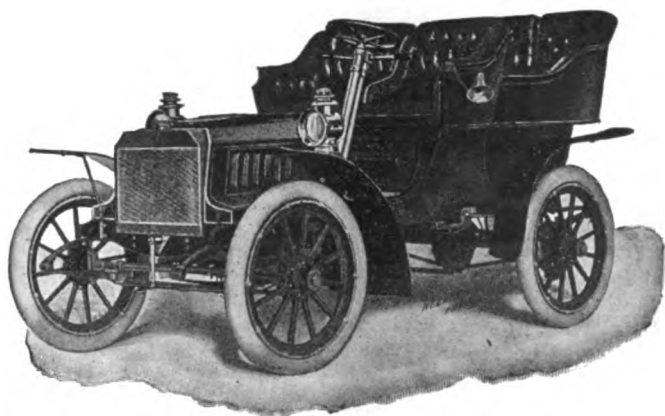


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Model "O" 16-18 H. P., \$2300.00
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FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — **\$1,700** at the factory.

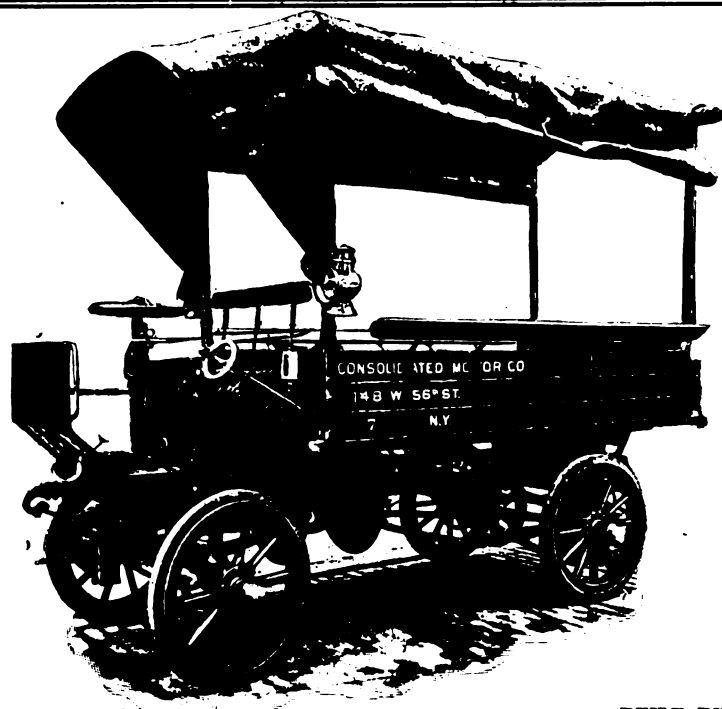
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Automatic oiling of engine and other parts.
Gear drive.
Every part instantly accessible.

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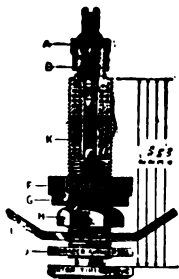
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OVER 2100 CADILLAC TRANSMISSIONS

in daily use, and not one worn out or broken. If some makers of automobiles had a record like that for their transmission, they'd "holler" loud and long, and they ought to. When we think of all the good points of a Cadillac and the few times we have told about them, we are almost ashamed of ourselves; but, after all, what was the use. We could not make enough Cadillacs when people wanted them to supply all.

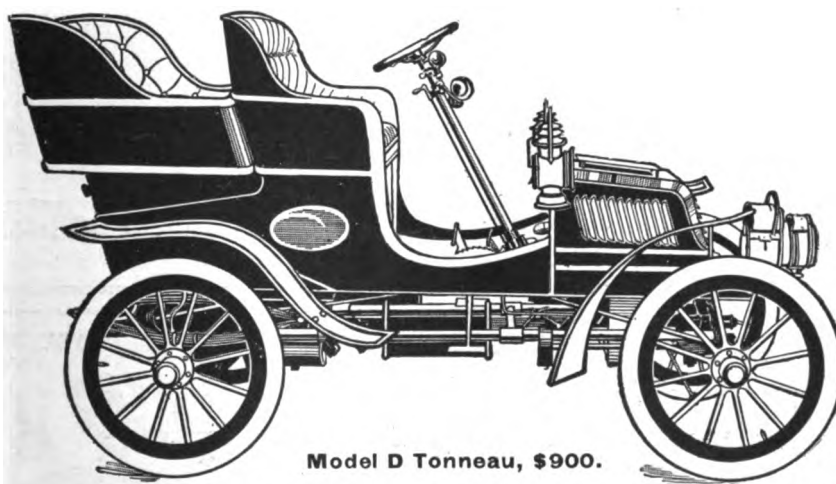
This planetary transmission of ours is a fool proof proposition. That's what it ought to be. It is unique in its construction, but positive in its action. There is no other change speed gear like it. It has an unequalled and unapproached record. It is compact and noiseless, apparently everlasting. To do with some transmissions what we've seen done with ours, would put them out of business too quick. When driving on high speed this 42 pound mass of forged gears acts as a balance to our 125 pound flywheel. The combination works well—vibration is reduced to a minimum. The gears run in oil, which is poured through but *one* hole. Each oiling is good for 200 to 500 miles. If any one tells you that they have a better transmission (or even as good) just look it up. If they have all they claim you will never have *any* trouble. If you should happen to get a car with a poor transmission, you might as well not have any. Besides a weak and flimsy transmission is an expensive affair. Look up the Cadillac transmission. It is another of those well made articles while the Leland & Faulconer Mfg. Co. know so well how to build.

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*Air Cooled.
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Simplicity.
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fellows will go.
Climbs a 14%
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New Catalogue.

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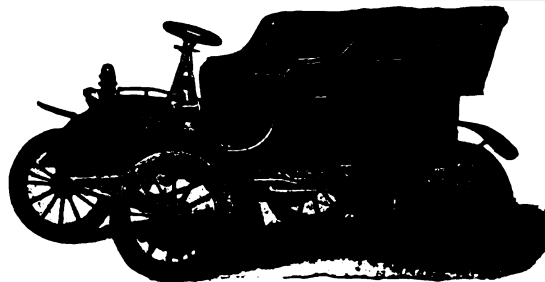
\$850.00

The more you learn about other automobiles costing less than \$1,500—the more you'll like the Elmore at \$850. The Elmore is exactly what it was designed to be—the simplest, most efficient, handsomest, most dependable, easiest riding light touring car on the market.

Let us mail you the 1904 catalogue and the unique booklet, "One Long Jump and Two Short Steps." Write today, please.

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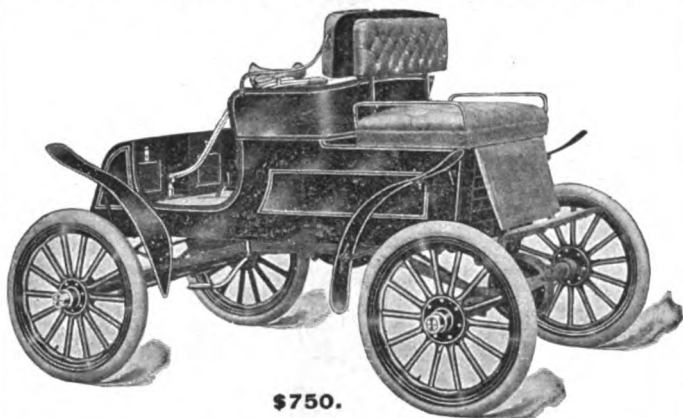
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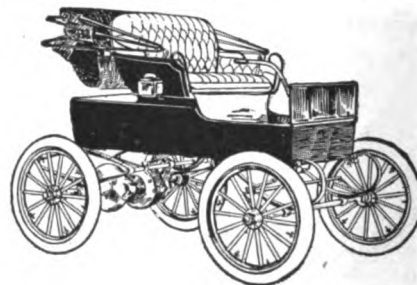
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Ample Battery.
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Send for catalogue and at the first opportunity examine a Yale.

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Why?

A great many people enquire why the Darracq Motor Cars are so popular and why so many more of these cars are sold than any other foreign make.

The answer is

Because they are Reliable and sold at the right commercial price.

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Sole American Agents,
655-654 Hudson St.,
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The Verdict of the User is What Counts

Follows a pretty good verdict from a user of the

Locomobile Gasolene Car

NEW YORK, June 15, 1904.

LOCOMOBILE CO., OF AMERICA,
Broadway & 76th St.,
NEW YORK CITY.

Gentlemen:—

I don't know whether it will serve any good purpose or not, but, be that as it may, my conscience compels me to admit the fact that I have derived most eminent satisfaction by use of car No. 99, which I purchased from you some three months ago.

Your car possesses a feature which is certainly a most important one in connection with the practical use of an "auto," and that is its availability. Literally, that means much, but, much as it means, the car I have possesses it. That feature and quality no doubt springs from the skillful construction, good material, good workmanship and a thorough and intelligent understanding of the business of "auto" building.

The Locomobile is a "peach," and no mistake.

Very respectfully yours,
J. P. B.

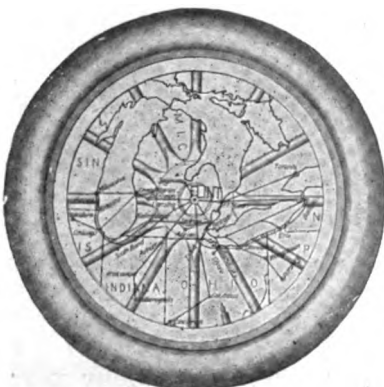
The *Locomobile* Company of America,
BRIDGEPORT, CONN.

BRANCHES New York, Broadway and 76th st.; PHILADELPHIA: 249 North Broad St.; CHICAGO, 1354 Michigan Ave.; BRIDGEPORT. Factory at Seaside Park; BOSTON 15 Berkeley St.
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IMPERIAL WHEELS MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
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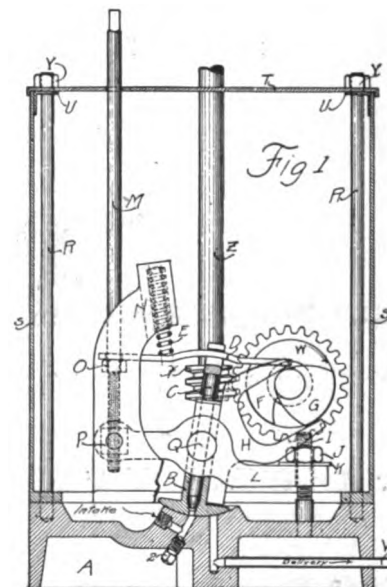
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THEY GET THE WHEELS.

IMPERIAL WHEEL COMPANY,
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THE HILL PRECISION OILER



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832 Austin Ave., Chicago, Illinois.

THE FIRST PRIZE

in the Annual Minneapolis Hill Climbing Competition has again been annexed by the

Rambler

On Kenwood Hill, 2680 feet long, a ten per cent. (10%) grade, in 1 m. 07 3-5 secs., it distanced its competitors, most of them costing three times its price, and for the

SECOND TIME

in that contest decisively demonstrated its superiority.

The supreme test of a touring car is on the road, not the race track, and the

Rambler

was built for road work, AND DOES IT.

Write for RAMBLER Booklet "W" and for "A Little History" of another noteworthy performance.

THOMAS B. JEFFERY & COMPANY,
KENOSHA, WISCONSIN.

BRANCH HOUSES:—Chicago, Ill., 304 Wabash Avenue, Boston, Mass., 145 Columbus Avenue.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, July 7, 1904.

No. 15

BURNED TO THE GROUND

**Vehicle Equipment Co.'s Brooklyn Factory and
Finished Cars Destroyed—Machine Shop Saved.**

Early in the morning on July 5, a fire balloon, sent up from Coney Island, landed on the roof of the factory of the Vehicle Equipment Company, at Borough Park, Brooklyn, and started a fire that wrought havoc with the affairs of the firm. The fire was discovered shortly after 3 a. m. by the night watchman, and three alarms were turned in. The buildings burned like tinder and the blaze was a spectacular one that gave the fire department a hard fight.

When the flames had been extinguished the main factory and assembling room, the paint shop, tin, blacksmith and woodwork departments were completely destroyed, and a number of completed vehicles and of others in various stages of completion were destroyed. The total damage was estimated on Wednesday by the Rainier Company at \$350,000, of which only \$200,000 was covered by insurance.

The salvation of the situation for the concern was in the fact that the machine shop full of a lot of specially constructed machinery, the drawing room, the battery room and the offices above it, were unscathed. Had they been destroyed and it been made necessary to have new machinery manufactured, the firm would have been crippled for months. As it is, it will go right on taking orders, and the only delay will be in those orders about to be filled.

In all there were twenty-four big electric trucks destroyed, including seven ready for delivery to the Anheuser-Busch Brewing Company, an opera 'bus and fourteen or fifteen electric pleasure carriages.

Secretary Lineberger, of the Rainier Company, which markets the Vehicle Equipment Company's products, said on Wednesday:

"The fire will set us back only about thirty days. We are now booking orders for delivery four months later the same as we have

been, but we will have to ask our customers who were to have their goods within the next thirty days to wait a while. New tools and machinery for the woodworking plant are being delivered to-day, and a temporary structure of corrugated iron is being thrown up to replace the buildings destroyed. In the meantime we are looking about for a site for a new factory, which will be begun as soon as possible."

Wants to Sell Harvey Plant.

Little hope of the differences between the stockholders of the embarrassed Chicago Motor Vehicle Company, of Harvey, Ill., appears to exist, and the concern is likely to be wound up.

Authority to advertise for bids for the sale of its assets is asked in a petition filed in the United States District Court, Chicago, last week, by Receiver E. A. Potter. Judge Kohlsaat granted the officers of the bankrupt concern five days to reply to the petition.

The petition for authority to sell the extensive motor vehicle plant states that the business has lost money since a receiver was appointed and that it is being conducted to the detriment of the claims of the many creditors. "There is no further advantage or profit in conducting the business," the petition sets forth. "The demand for the product of the alleged bankrupt company is practically at a standstill."

The bankruptcy litigation involving the firm has been bitterly contested by many of the creditors and it is believed the petition filed by the receiver will be answered from several sources.

Show Dates for 1905.

Dates for the automobile shows of next winter and spring, under the new plan of all shows being sanctioned by the National Association of Automobile Manufacturers, have been fixed as follows:

The New York show in Madison Square Garden will run from January 14 to January 21. Chicago is down for February 4-11; Detroit, February 20-25; Cleveland, February 27-March 4; Buffalo, March 6-11; Boston, March 13-18; Philadelphia, March 20-25, and Washington, March 29-April 5.

DEATH BLOW TO MERGER

**A. A. A. Governors Declare Off the Proposed
Union With the A. M. L.**

An official death blow was given to the plan of merger between the American Automobile Association and the American Motor League at a meeting of the governors of the A. A. A., held on Wednesday of this week.

None of the members of the joint committee on constitution and bylaws, composed of S. M. Butler and Emerson Brooks, for the A. A. A., and I. B. Potter and Frank Egan for the A. M. L., was present. President H. W. Whipple and Messrs. C. H. Gillette, G. E. Farrington, E. C. Lee, S. H. Valentine, Augustus Post, A. R. Pardington and James L. Breese, attended the meeting, and settled it themselves.

There was considerable discussion, but all that was given out after the meeting was a typewritten statement signed by H. W. Whipple, president, and reading as follows:

"The proposed merger between the American Automobile Association, and the American Motor League will not take place since the committees, which were appointed to draw up a constitution, did not agree; this agreement on a constitution having been a condition precedent to the proposed merger."

It is understood that overtures will be made toward some sort of a friendly agreement for a co-operative working basis between the two organizations.

After this conclusion was reached, C. H. Gillette was re-elected secretary of the A. A. A.

While the matter was being discussed after the meeting the question was raised that inasmuch as the members of both organizations had voted for the consolidation was it not an accomplished fact that the American Motor Association had supplanted both the A. M. L. and A. A. A., and was really in existence, but minus a constitution. It was also questioned whether the A. M. L. might not raise this technicality and proceed under the title of American Motor Association, and asserting that an American Motor Association is in existence as the successor of the

A. A. A., make an interference in the title to the Vanderbilt cup. The votes of the members of both bodies had, it was urged, voted the A. A. A. and A. M. L. out of existence, and the A. M. A. into existence.

These arguments were answered by the declaration of the directors that the vote of the members was for an amalgamation, contingent upon an agreement to a new constitution and bylaws for the united body, which agreement, not having been attained, prevented the amalgamation becoming a fact.

Speaking further on the subject, one director said that the signing of the deed of gift for the Vanderbilt cup had made the A. A. A. an organization of international importance, and one that is no longer merely local, and had assured its permanency.

Why the N. A. A. M. was Quorumless.

Hot weather and a lack of business needing attention resulted in there being no July meeting of the executive committee of the National Association of Automobile Manufacturers, when the usual date, the first Wednesday of the month, came around. The way the session was skipped without there being any official postponement, or other formal action is interesting. There was no meeting because there was no quorum. That is the record for the minutes. There was no quorum, nor even any part of a quorum, because some time before the date for the meeting the word was sent out to the members of the executive committee that there would be no quorum for a July meeting.

Scale Peoples' Rambler Delivery Cars.

Their facilities for selling and delivering their patent scales, which indicate the total price of the article weighed at any rate per pound, have been immensely increased by the adoption of automobiles for their salesmen, according to the Moneyweight Scale Company of Chicago. This concern now has in use thirteen Rambler cars, in which their salesmen travel about the country carrying a stock of scales with them. The bodies of the cars have been altered for the purpose of carrying the scales, and now not only are their salesmen able to cover territory in less time, but no sales are lost through delay of delivery.

Olds Catch Up on Deliveries.

After a long period of strenuous struggle, during which they were beset by impatient customers, the Olds Motor Works have reached a point where they can make immediate deliveries of the light tonneau and curved dash runabout. This will be welcome news to Oldsmobile admirers, who have hitherto been unable to get deliveries except after a long wait.

Three Autos Destroyed by Fire

Fire caused \$3,000 worth of damage at the store of De Conde Mfg. Co., 27 Winsor-st., Cambridge, Mass., last week. Three automobiles waiting to be repaired were totally destroyed.

BUILDING ON NEW LAND

Important New Additions Being Made at T. B. Jeffery & Co. Plant at Kenosha.

Signs of prosperity at the headquarters of T. B. Jeffery & Co., at Kenosha, Wis., are of a most tangible sort in these midsummer days. Work is now progressing there on two new factory buildings, each 140x275 feet, although it was only last winter that the original factory, 700x100 feet, was augmented by a new building 275 feet square.

The new buildings are being erected on a newly purchased plot of twenty-six acres of land, which makes the grounds of the plant now cover thirty-three and one-half acres. Nor is this all of the story of prosperity in this place. A new engine house, to accommodate a new engine of 300 horsepower, is being built, the foundry facilities are being doubled for the second time this year, and a new building for the brass foundry is being put up. Throughout the whole plant the automatic sprinkling system for protection against fire has been installed.

Nearly seven hundred men are now employed at these Rambler works, and the output for the season is being increased by two hundred cars in order to fill contracts.

Easily Scaled Talcott Mountain.

On Tuesday last H. P. Maxim and H. W. Alden, of the Electric Vehicle Company, made a hill climbing test of one of the company's light gasoline cars, with results of the most gratifying character.

Leaving the factory at 2:20, they drove the car to the top of Talcott Mountain by the Albany avenue route, descended to the foot of the mountain on the Avon side, turned around and climbed back to the summit and returned to the factory. The round trip was made in one hour and five minutes, just within the legal speed limit. The mountain was crossed both ways without resort to the low or hill climbing gear of the machine and this constituted the remarkable feature of the run. Going out, the two-mile climb from the old toll gate on Albany avenue to the summit was made in twelve minutes. The up-grades often exceeded 20 per cent, and a twelve miles per hour gait was maintained up the very sharp rise to the summit from the Avon side on the return trip.

Oldsmobile Climbs Three Ghauts

Oldsmobile successes in foreign lands continue to be recorded with noteworthy regularity. The latest feat is that of Dr. J. M. Tarwachand in climbing the three Ghauts to Mahableshwar, India, from Khandalla, in an Oldsmobile runabout, the same machine in which he had previously climbed the Bhore Ghaut. These feats of mountain climbing have been deemed impossible for machines of high horsepower, and the fact that they have been accomplished by a five horsepower Oldsmobile speaks volumes for the power capabilities of that car.

The Week's Incorporations.

Elizabeth, N. J.—The Martin Automobile Company, with \$50,000 capital, to deal in automobiles and automobile boats.

New York, N. Y.—Automobile Depot, with \$3,000 capital. Directors: E. C. Griffith, P. M. Pelletreau, New York City; W. H. Estes, Brooklyn.

Springfield, Mass.—Bowman & Gregg Company, with \$3,000 capital, to make motors. Promoters: George W. Bowman, William M. Gregg, Belle Y. Bowman, F. G. Woden.

Columbus, Ga.—Wearing Proof Pneumatic Tire Protector Company, with \$2,000 capital, to manufacture a leather tire protector. Incorporators: James F. Burnham, Milton Lanier and C. C. Green.

New Garage for Grand Rapids.

Contracts have been let for the construction of a building for automobile storage and repairing on Louis street, between Ottawa and Market streets, Grand Rapids, Mich., for the National Electric Supply and Manufacturing Company. The building is to be one story and a basement in height, of steel and cement block construction, and will have a frontage of 32 feet on Louis street, with a depth of 66 feet.

The workshop will be located in the basement of the building, while the first floor will be utilized for the storage of electric automobiles, exclusively. There will be a large elevator for service between the two parts of the building.

One-Armed Man Drives Haynes Car.

It speaks volumes for the ease and simplicity of control of the Haynes car when it is known that a one-armed North Dakota salesman uses it in his business. He is employed by a cigar concern, and he covers his route with the Haynes car. The latter has a large box divided into compartments, rigged up back of the seat, and with this filled with cigars the one-armed chauffeur starts on long trips through the surrounding country.

They Show the Way.

That "Dick Welles" and Solar lamps both "show the way" is the contention of the Badger Brass Co., Kenosha, Wis. To emphasize the fact that they are sending to their friends and customers a framed photographic reproduction of the famous running horse Dick Welles, whose record is 1:37 2-5, below which are two styles of Solar lamps. The inference, of course, is plain that both are leaders.

Buckboard Surrey in Town.

The first of the Orient buckboard surreys has been received by E. J. Willis, the Walham company's New York representative. It is fitted with extra heavy springs and the frame is trussed.

The store of the Allegheny Automobile Co., Allegheny, Pa., was destroyed by fire last week.

VANDERBILT CUP DEED

Final Articles Signed by Donor and A. A. A. Course Policed a Month Prior to Race.

At a meeting of the directors of the American Automobile Association, held Wednesday, the deed of gift of the William K. Vanderbilt, jr., Automobile Cup was ratified. Mr. Vanderbilt was present, and signed the instrument, as did also President Whipple and the other governors present.

Concerning the first race for the cup, which is to be held on October 8, Chairman A. R. Pardington of the A. A. A. racing board furnished a little interesting news. He said that the full particulars of the course, its location, length, number of laps, the controls, etc., will be announced on September 8, the date that the entries close. Before this information has been given out the course will be specially policed by constables in the pay of the American Automobile Association, but regularly sworn in as police officers. These special constables will be mounted on speedy motorcycles and kept on the course from September 8 until October 8. According to Mr. Pardington:

"At the same time that the course is made public announcement will be made that it is thus specially policed, and that any one seen on the course with a racing car will, if he is an entrant, be barred from the race. The entrants can examine the course and familiarize themselves with it all they want to in runabouts and touring cars, but there must be no practising on it, and all persons caught speeding on the course in any sort of a car will be prosecuted by the A. A. A. Our special police will be on motorcycles so that they can catch scorches, and they will be men who know people, too, so that they will be able to recognize offenders. We want to hold this race on Long Island not only this year, but next year as well, and after that also if we can keep the cup here, and we do not want our chance of getting legal permission for the race spoiled by speeding rehearsals over it before the time."

It will be seen from these remarks that the course will be on Long Island. Concerning the length of the race, Mr. Pardington said it would be about 280 miles.

Chairman Pardington further said that considerable interest in the race has been manifested in Europe, that several letters of inquiry from abroad have been received, and that there is little doubt but what the first race will be an international event.

The deed of gift covers much of the same ground as the rules, of which a synopsis was given in the Motor World some time ago. Following is given the contents of the deed as it was handed out, typewritten, by the officials of the A. A. A. One point of interest in it is that a bond of \$3,000 will be exacted from the temporary possessors of the cup, which furnishes the first official indica-

tion of its value. Another point is that Mr. Vanderbilt has made the provision that in case of his death the cup will become the absolute property of the A. A. A., or its successors.

This is the deed of gift:

I, William K. Vanderbilt, jr., do hereby present a silver loving cup to the American Automobile Association, under the following conditions:

1. That the competition of said cup shall be open only to clubs that are recognized by or affiliated with the American Automobile Association, and to clubs recognized by or affiliated with the Automobile Club of France.

2. That not more than ten cars represent any one country.

3. That the cup shall be absolutely a Challenge Cup, owned by the American Automobile Association or its successor, and shall not be donated to any individual, but may be held by the representative club of the winning country under the following conditions:

(a) That the winning club shall deposit with the American Automobile Association, a bond or bonds, whose actual market value is \$3,000, and said bonds to be held by the American Automobile Association.

(b) During subsequent competitions, should the cup be won by any foreign country, the previous winning club shall be returned its \$3,000 bonds after the American Automobile Association has received an equivalent amount from the next winning club; the previous winner not to give up its receipt for its bonds until notified by the American Automobile Association that it has received an equivalent deposit from the subsequent winner.

4. That the name of the winner each year shall be inscribed on the cup, together with the location of the race, date, distance and time.

5. That no car shall be allowed to compete for the cup whose weight shall exceed 2,204 pounds, or under 881 pounds. Each car must carry two persons seated side by side, whose weight must be at least 132 pounds each.

6. That the competition for said cup shall be held annually (the date to be left to the American Automobile Association in 1904 and 1905). Subsequent dates may be decided upon by the previous winning club, together with the racing board and the donor of the cup.

7. That the competition shall be not less than 250 miles, nor over 300 miles, and must be held on a recognized regular highway or an automobile speedway, and under no circumstances may the race be held on a horse or bicycle track.

8. That the race shall take place in 1904 and 1905 in the United States. Subsequent to 1905 the contest may be held in any country holding the cup.

9. That the commission for 1904, racing board A. A. A.; 1905, racing board A. A. A.; the donor, one member of the sports committee A. C. F., named by the president of the A. C. F.; subsequent years in the United

States, same as 1905; subsequent years abroad, sports committee A. C. F.; the donor, one member of racing board A. A. A.

10. In case of the death of the donor of the cup, it shall become absolutely the property of the American Automobile Association or their successors.

The terms of this deed of gift may be changed by the donor at the request of the racing board.

Should the terms be broken regarding the contests for the cup as herein described in this deed of gift, the cup shall then revert to its original donor.

(Signed) W. K. VANDERBILT, JR.

July 6, 1904.

(Witnesses) HARLAN W. WHIPPLE,

President American Automobile Ass'n.

ELLIOT C. LEE,

SAMUEL H. VALENTINE,

A. R. PARDINGTON,

AUGUSTUS POST,

GEO. E. FARRINGTON,

JAMES L. BREESE.

July 6, 1904.

Wanted a "Shoo" Horn.

"I want a horn. What will it cost me?" The speaker had entered the Oldsmobile branch on Thirty-eighth street, New York, and propounded this question.

"Anything you want to pay—from \$1 up to \$25," was the reply. "Is it for your own use?"

"No, my wife wants it. She uses my Oldsmobile a great deal now that we are in the country, and she says that people get in her way and make her nervous. So she wants a horn to shoo them away. I guess it doesn't make much difference what kind it is so it is a horn; so I'll take one of the dollar kind."

The salesman directed him to Miller's establishment, and he crossed over to make his purchase of a horn that would "shoo" people away.

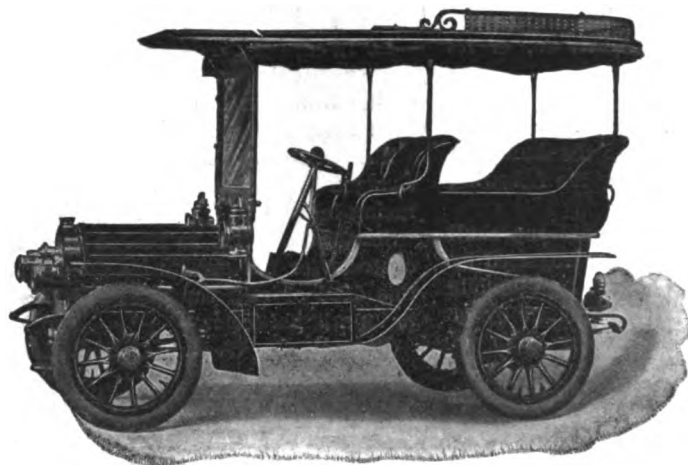
Springfield Parade Honors for Knoxes.

At Springfield, Mass., on July 4, there was an automobile parade that would have done credit to many a larger city. It was a floral and decorative display, and there were seventy cars in line, handsomely or curiously decorated.

The award of prizes was something like the winning of a sweepstakes for Knox cars, they getting the first four and the last out of the seven prizes. The fifth prize went to a Winton car, and the sixth to a Stevens-Duryea. Out of the seventy cars in line, twenty-seven were Knox vehicles.

Made Record Between California Towns.

John F. McLain and L. L. Shettler, of the Pioneer Automobile Company, of Los Angeles, Cal., drove from that city to Santa Barbara in a 20 horsepower Winton automobile in 5 hours and 35 minutes. This is the best record thus far made for elapsed time on automobile runs between the two cities. The best former record, elapsed time, was 6 hours and 45 minutes, and actual running time was five hours and three minutes.



The 1904 Haynes

1904
Tonneau

TWO MODELS

1904 Light
Touring Car

Tonneau, \$2,550, with top and front glass, two Solar No 1 gas headlights two Dietz Regal oil lights, tail light, horn with tube, and full equipment. \$2,450 without top and front glass.

Light Touring Car, \$1,450, having much the same outward appearance as our famous Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

We originated the use of aluminum castings in gas engine construction and, making our own composition and castings, have brought them nearest perfection. Our invention is universally imitated, but never equaled. See the catalogue.

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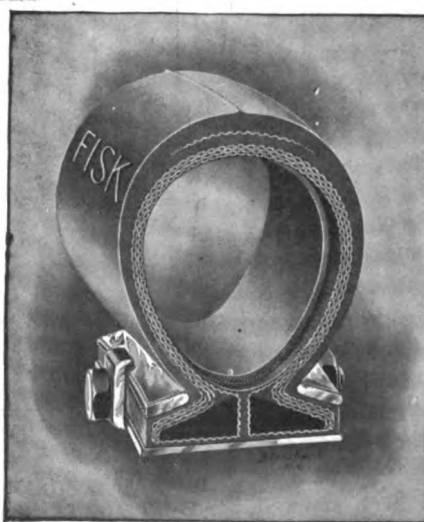
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Los Angeles, J. A. ROSESTEEL, 649 Broadway
Toledo, TOLEDO MOTOR CAR CO.

Brooklyn, BROOKLYN AUTOMOBILE CO., 1239-41-43 Fulton St.
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NEW YORK, JULY 7, 1904.

A House Divided Against Itself.

All immediate hope for union between the two national automobile organizations being dispelled the question of what will be the consequences naturally follows. While it is not to be regretted that one man will miss having a nest feathered for him, the wisdom of the course pursued by the A. A. A. arbiters is not discernible.

Whatever the respective merits of the two organizations the separate existence of them in the same field is apt sooner or later to bring about a bitter realization of the adage that "a house divided against itself must fall." This is a case where there is no virtue in competition. It is a division of strength, a scattering of forces, which united would be more than doubly powerful. The condition is unfavorable for the growth of both bodies, for with two claimants to his membership after him, a man is apt to take

an attitude of permanent indecision and not join either body.

As we have before said, the A. A. A., in the question at issue, has taken a thoroughly untenable position. Its attitude with regard to representation has no support in precedent, nor in equity, and this is the more unfortunate, because it putting itself in a false light, the enemy will be strengthened; nay, he has been strengthened; first, by being recognized as worthy of being sought as an ally, and next as being so feared as to be denied a fair and equal rule of representation in the proposed amalgamated body.

One curious feature of the lamentable affair is that the A. A. A. executives seem to have copied arrogance and demagoguery, in that neither body apparently has complied with the terms of the merger by appointing a governing body of ten to form a joint board of twenty to decide on the constitution question. True, it has not been a case of one man rule in the A. A. A., but the governors, so far as we have seen, have been arbitrary in dictating what sort of an agreement they would agree to, and not letting the matter being referred to any others than themselves.

In the following two sections of the merger plan is found what the members of both organizations voted for:

"Sec. 3—The general management and control of the affairs, funds and property of the united body shall be vested in a governing board, to be composed of ten directors to be appointed by the A. M. L. and a similar number to be appointed by the A. A. A.

"Sec. 7—A committee consisting of two members selected from the present membership of the A. M. L., and a like number selected from the present membership of the A. A. A., shall prepare a constitution and by-laws to serve the purposes of the United body, and shall present the same to the governing board for its adoption. The constitution and by-laws so adopted shall remain in force until amended or superseded at a regular or special meeting of the united body, upon due notice. Such constitution and by-laws shall, among other things, make due provision for the continuance of clubs, local organizations and individual membership in the American Motor Association, and shall harmonize as closely as practicable with the constitution and by-laws of the A. A. A. and A. M. L. as framed prior to the merger of the two bodies."

If there has been any meeting of this joint governing body of twenty, the news of

it has been guarded from publicity with success unprecedented.

In reviewing the matter it is interesting to read again a part of the formal statement regarding the merger plan, given out by President W. E. Scarritt, of the Automobile Club of America, at the time when that plan was first made public. He then said:

"In undertaking such a work as this all negotiations are hopeless unless they are entered upon, not only in a spirit of fairness, but of conciliation as well. The chief thought underlying our deliberations has been what is best for the organizations as a whole, what plans may be evolved that will bring the automobilists of America into one clean, strong, helpful, national association."

Again, he said:

"In union there is strength. It was felt that the older and stronger each of the separate organizations grew the more difficult would be the task of bringing them together."

From all of which it would appear that there are excellent reasons for a reconsideration of the verdict.

Silent Cars in Favor.

Times have changed—since the days when the average user of a gasoline car liked and even welcomed noise. Now he demands a silent car—silent, that is, by comparison with the thunderous, nerve-racking cars which were only a short time ago the rule rather than the exception.

The motorist who gauges his pleasure by the volume of noise emitted from his muffler has not wholly passed away. Some extremists of this type will even cut out their mufflers in order to give the public the full benefit of the exhaust from the engine, with the result that may readily be imagined. But they are in a decided minority, a minority which steadily decreases. It does not take any abnormal amount of discernment to see that the time is likely to come when people of this class will execute a volte face and go in for silence quite as strenuously as they formerly did for noise.

At the present time nearly all cars have undergone improvement in this respect. Designers and makers are quick to see that the public want quieter cars, and as they know full well that quiet cars mean efficient cars, and that in following the present fashion they are pursuing the logical line of development, the progress made in this direction is not surprising. In minimizing noise power is conserved and used in pro-

PELLING the vehicle, instead of being wasted; for it has become an axiom that noise is power diverted from its proper use.

Sensitive people like neither noise nor its concomitant, vibration. With them the highest possible praise of a gasoline car is to say that it is as quiet as a steam or an electric vehicle. It is this quietness and smoothness of running that has given the high priced foreign cars such a vogue, and motorists who have once experienced these qualities are never content to take a backward step and return to the old order of things.

The Little Troubles.

It is the little things of life that trouble us most, and this is particularly true of the minor ills that affect the motorists. The big troubles he can endure with some degree of equanimity, but because they seldom happen and because when they do it is frequently impossible to make a roadside repair, and so he has called philosophy to his aid.

It should be the task of every tradesman as well as every motorist to use every endeavor to eliminate these little troubles. A good system will go a great way in the desired direction; but no system is infallible, even if carried out to the letter, and what is more to the point, it is seldom so carried out. There are always careless employees to gloss over things and to "guess" that it will be all right when they do so. The fact that it is all wrong does not disturb them much, for they are not the sufferers—or at least not the chief ones—when the inevitable trouble comes.

So repeatedly has this proneness of employees to make blunders been evidenced upon careful drivers that they look after everything they possibly can themselves, realizing that "eternal vigilance is the price of success."

Accidents and Their Avoidance.

An unusual number of automobile accidents have come to notice in the last few weeks. Yet a reliable car, properly driven by the average person, at reasonable speed, is as safe, if not safer, than any other form of vehicle using the ordinary roads and highways, and accidents should be far between.

The most frequent accidents appear to result from an operator losing all control of the machine. The car cavorts and turns until it upsets or runs into something.

When this occurs, either the driver has lost control of the steering mechanism through the wheel or lever being wrenched from his grasp, or as came to the notice of a Motor World man the other day, when a knuckle snapped when one of the front wheels was subjected to a sudden bump. Often an obstruction or collision may be averted by a little coolness and judgment. If danger is imminent, the driver should brace himself well in his seat and maintain a firm grasp on the steering wheel or lever. The importance of this cannot be too strongly impressed upon inexperienced persons. Should the steering gear become deranged, such as knuckles or connections breaking, when a front wheel strikes an obstruction or gets into a rut, then, of course, the driver is left absolutely helpless, and if he is going at any speed then an upset car or collision is the result. Nothing is of such vital importance to insure safety as ample strength and reliability in these parts, and it is criminal to turn out any car where the least doubt exists.

Railway grade crossings have been the cause of several serious and fatal accidents within the last two weeks, and too much care cannot be exercised at these places. High speed trains and cars often come with great suddenness. The sense of hearing is altogether unreliable, particularly if the car has a noisy engine. The surroundings may be such that sufficient view of the track cannot be had. Wherever railways cross each other they must come to a full stop and not proceed till signalled; before this rule was enforced disastrous accidents were of frequent occurrence. The same precautions should be exercised with an automobile. One should never attempt to cross till perfectly sure that the way is clear. Flag and signal men cannot be relied upon, and to drive across without any precaution is a great risk.

Unblushing Law Breaking.

One of the most violent of the autophobic journals of this city is the Evening World. It loses no opportunity to speak an ill word for the horseless vehicle, and its diatribes when accidents occur in which an automobile is even remotely concerned are of the most violent and extreme type. Yet for years this same journal has been one of the most persistent and offensive violators of the local speed ordinances, through its use of motor vehicles for delivering its late editions. It is unblushing in its lawbreaking, too, as the

following extract from a recent issue makes plain:

"Again the Evening World was first at the racetrack with its handicap extra yesterday. The same editions of other papers, issued at the same time, did not reach Sheepshead Bay for many minutes after the Evening World's big Pope-Toledo automobile dashed up to the track with its load of extras.

"The machine, which can make sixty miles an hour, left the Pulitzer Building immediately after the Suburban was run, and twenty-six minutes later boys were selling the papers at the racetrack.

"Four men were on the automobile besides the load of papers, and it was all they could do to hold on as the machine tore around corners and fairly ripped up the streets of Brooklyn. The police had cleared the route and were on the lookout for 'a big red automobile which might possibly exceed the speed limit.' But they did not molest it. They simply saw that no one was in the way."

Twenty-six minutes from Park Row to the racetrack, almost ten miles away! Over congested Brooklyn Bridge and through the crooked, crowded downtown streets of the City of Churches at an average pace of almost thirty miles an hour. No part of the distance can be legally traversed at a speed in excess of twelve miles an hour. But the World flyer did the trick at three times this speed and no policeman lifted his hand and cried "Stop!" Consistency, although a jewel, was never prized by the Pulitzer Building publication.

One Good Likely.

One great good that the race trophy donated by Wm. K. Vanderbilt, Jr., seems about to accomplish, even before the first contest for it is held, is that of dispelling the incongruity that now obtains in the the recognition abroad of the New York Automobile Club as the representative body of the United States. Because of the Vanderbilt cup, the American Automobile Association is likely to get the recognition that it of a right should have, and this recognition will naturally lead it to being the next challenger for the Bennett cup, instead of the falsely named Automobile Club of America.

Already in its preliminary plans for safeguarding the course of the Vanderbilt cup race against speeding before the event, the A. A. A. racing board has shown itself possessed of higher prevision and competency than ever was attached to any race committee of the A. C. A.

AN AMERICAN VIEW OF THE INTERNATIONAL RACE

Story by Letter from the Motor World's Staff Representative—"Rest" Resort a Babel—Visitors' Purses Had to be Long Ones—Germans Disappointed, but Thery's Victory Deserved—Peasants Gain Entrance to Sacred Precinct Through a Drain Pipe.

Homburg, June 21.—While the echoes of the international race are still ringing in our ears here, the cables have flashed the name of the winner, the newest and brightest star in the automobile firmament, and before this reaches the Motor World office the general news of the race will have become well known. The event will be written about from so many different view points, however, that the impressions of American spectators, together with a few incidents of the contest, may yet be interesting.

The race of 1904 for the Bennett Cup was certainly a great event. The day was perfect. A heavy thunderstorm of the night before had laid the dust, so that the roads were in magnificent condition; the entire course was superbly guarded, miles of wire fence being stretched at either side of the road about the starting and finishing points, and there were no casualties despite the tortuous course, which was truly fearful in its sharp turns, double bends and steep descents with abrupt rises. And the race was fairly and squarely won by Thery, of France, on a Richard-Brasier machine.

But around this simple recital there was a wealth of coloring and incident; it was an international contest where the stakes were high and where racial feeling cropped out again and again in many accentuated forms. It was stamped with the seal of royal approval and graced by the presence of royalty, headed by the Kaiser and Kaiserin, and including Prince Henry and his princess, together with a host of satellites that revolve about the greater orbs; and in the train of these was a vast outpouring of the masses. The event was attended by visitors from all over Europe and America, more than fifteen hundred automobiles, all of them being touring cars, being registered as race attending machines and labelled with the initials of the contemptible abbreviation, "G. B."

Add to this that the scene of the event was within a truly gorgeous setting, a veritable fairyland of nature, and seen in its choicest garb, on ground whose historical record looks back to the days of the Roman Empire and which had been the theatre of many other contests more sanguinary; the majestic Taunus mountains looked down on the scenes of dancing animation and riotous color within their very shadows, for the course in places skirted the base of lofty peaks. Let him picture all this, and the reader who was not present may scarcely yet conceive of the beauty and picturesqueness of the theatre in

which the race was run. To carry the romantic effect still further, the grandstands were arranged after the manner of the old Roman tribunals, the royal box in the centre on the left, and beneath its canopied top royalty sat enthroned, flanked and faced by the boxes of the elect. This was at Saalburg, forty minutes' ride on the trolley from Homburg, the headquarters of the visiting hosts and of the Deutscher Automobile Club, under whose auspices the race was held. Alas! poor Homburg! Famed the world over as a "rest cure," most widely known of German watering places, patronized yearly by the idle rich and by a host of the illustrious, including King Edward—Homburg, a collection of magnificent hotels and villas, fronting on the gardens and parks of Paradise and presided over by a band of the most heartless and high handed robber barons in the wide world. Homburg was headquarters for the army of automobilists. Wise men were they who, bent on repairing shattered nerves, fled at the first approach of the advance guard of these terrifying hosts.

For two days and nights previous to the race the air was rent and torn with the most agonizing sounds, ear splitting and nerve racking; the tearing and clashing of gears, the cutting out of mufflers, with the attendant staccato explosions of high powered motors, and the most persistent and totally unnecessary tooting of horns imaginable. Verily Homburg as a "rest cure" was the refinement of sarcasm.

But Homburg did itself proud in dressing up in honor of the visitors, and on their arrival hastened to undress and strip them of everything they possessed of a monetary character. Words fail at the recollection of it, and great corporations would fail were the race period to be prolonged. However, the streets were handsomely and tastefully decorated, every hotel, villa, house and shop floated a profusion of flags and bunting, the black, white and red barred standards of Germany being intertwined with the bright tricolor of France and brushing the folds of both the emblems of Austria, Belgium and Italy, and even the star spangled banner of our own blessed land—never so appreciated as when we are on foreign soil.

The Deutscher Automobile Club's headquarters were located in the big government building on the main street, and here the visitors repaired to get information—and fortunate was he who could get any at all. As for the press men, they were given no attention whatever, nor at the race was any accommodation of any kind provided for

them. They were merely given a ticket of admission to the inclosure, which ticket permitted them to wander where they would, including the royal box and the box of the officials directly opposite it. The only way to find this out, however, was to head for some place it was desired to get, and go there unless stopped.

On the morning of the race it was a tired and sleepy looking crowd that wended its way to Saalburg. Those who, perforce, were compelled to resort to the trolleys had a hard time of it in the jostling, pushing crowd. The cars were run with provoking deliberateness and infrequency, being wholly unable to handle the traffic, either going or returning. Saalburg reached, a human stream went under the road by means of a tunnel, the roof and sides of which were covered with fir boughs. Incidentally, the sloping banks that formed the passageway in front of the grandstands and inside the fence were also carpeted with fir boughs, which were slippery as ice as many unwary "Frau" and plump "Herr" discovered before the day was over to their great discomfiture and the vast amusement of the beholders.

The race was scheduled to start at 7 o'clock, and as German military discipline excludes the idea of delay, this necessitated arising about 4:30 o'clock. Early as was the hour of the start, the Emperor was on hand, arriving in a gorgeous coach and four and accompanied by his automobile, on which the royal coat of arms was emblazoned and in which sat the chauffeur and footman rigid as wooden Indians and arrayed in gorgeous brown and gold livery.

The scene at this time was animated in the extreme. Down the track the long line of racing cars gave out deep, thunderous growls and anon a roar like a rattle of rapid fire artillery as the process of "tuning up" went on; the long files of automobiles discharging their human cargoes to mingle with the overburdened trolleys, fakirs barking their wares of souvenir "Postkarte" and other novelties, and the rattle of preparation issuing from the dozens of beer gardens which flanked the course on either side, all combined to lend din and action to the scene.

And the soldiers and police! They were everywhere and in every conceivable kind of uniform; it must be confessed that the uniform in many cases looked far better than the man within it; and these same uniforms, with the spiked helmets glistening in the bright sun, gave a burnishing touch to the colorful whole.

On the course the privileged camera fiends

swarmed; now and then some ambitious individual tried to climb the treacherous wire fence, only to be promptly and ignominiously hauled back by the police; and so with many incidents the minutes wore away until the hands of the clock pointed to a few minutes of 7.

Suddenly the general confusion seemed to cease and all interest was centred down the line at the starting point, which was about halfway up a considerable rise and about four hundred yards straightaway from the grandstand. To this point I picked my way, taking a position on a small eminence—the ruins of an old cellar wall, and situated just in front of the starting point.

Here was car No. 1 on the line, and in it the Machiavelian Jenatzy, tense and nervous, as usual, pouring forth a volley of words, the import of which could, by me, only be guessed at. To him, as last year's winner, was given the honor of being first away, and in him and in De Caters Germany's faith was centred and pinned fast.

Of a sudden a shout of warning was heard. The machine quickened its dull roar, the red flag was held up, quivered a moment and fell, there was a sound of the clutch being slipped in, the great machine fairly bounded forward, was under full headway in astonishing time and off up the hill, past the roaring swarms of humanity in the grandstands and had disappeared over the brow, not in a rushing cloud of dust, for there was none,

the last vision being the back of a huddled figure, the coat bellied out round as it dashed into the wind, and so the race was on.

Seven minutes later (at 7:07, for Jenatzy was sent away on the dot of 7) Edge was given the word, and he, too, got away in good shape. It was Thery, though, No. 5, who was afterward returned the winner, that made a lightninglike start; he seemed to shoot forward at the word, and was going like the wind before he seemed to have time to gain headway, and yet, wonderful to behold, he took both hands off the wheel to pull down his cap after starting.

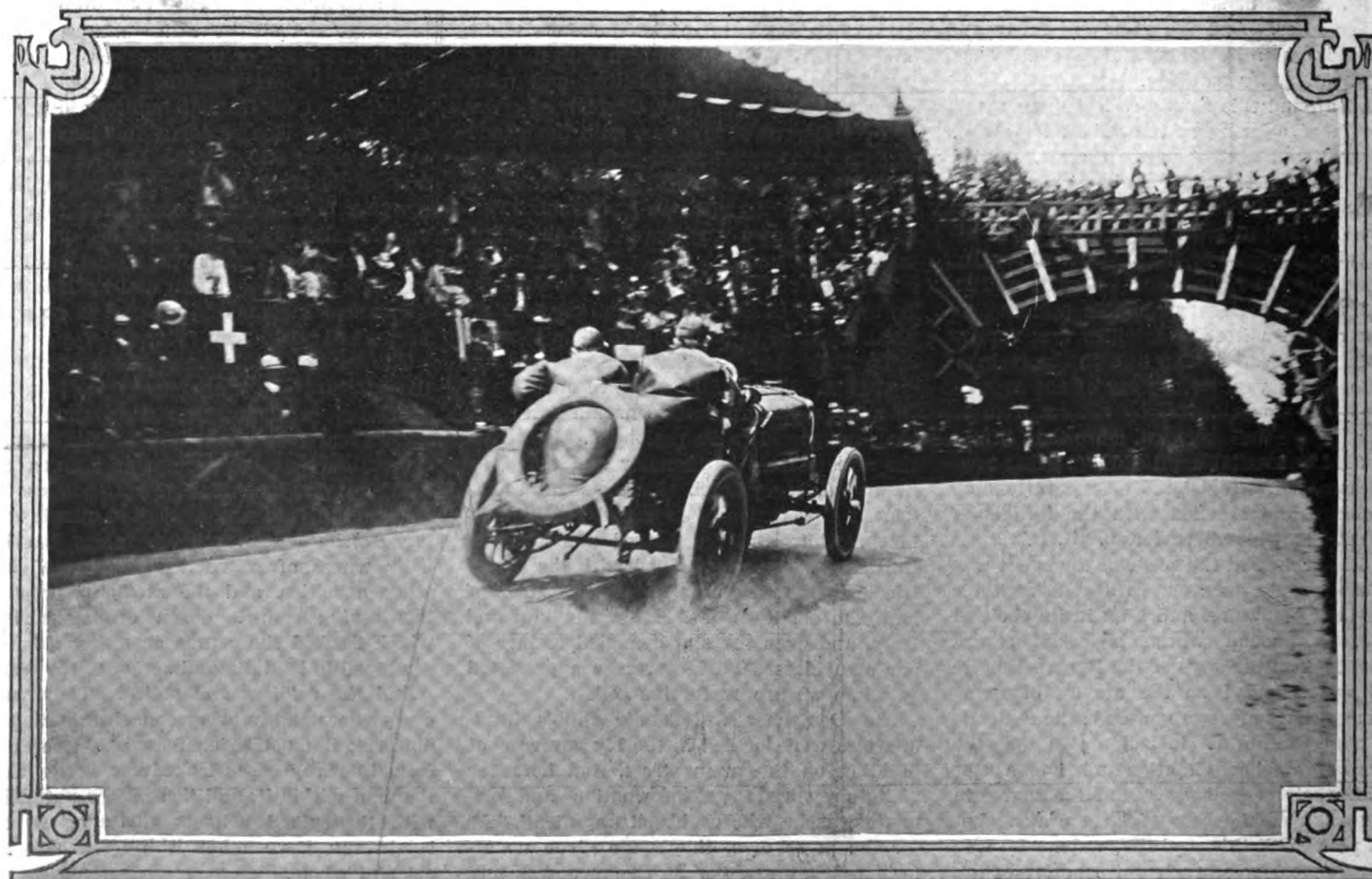
Poor Baron de Caters, in No. 8, a half minute before the word was given, had his motor stop. He jumped out, worked frenziedly, jumped back again, while his mechanic frantically turned the motor over and over, but no welcome sound of an answering explosion greeted the straining ears. Fateful seconds wore by, the flag dropped, De Caters was out lifting the bonnet and trying to locate and rectify the trouble. Five minutes passed and he was sent back from the line to give way to the next starter. As he coasted back away from the line De Caters's face was a study. I wish I could have snapped it with a ready camera, but the crowd was too dense. On it dismay and wrath were written large, for the preparations of months were being wasted with every tick of the watch, and a chorus of "Vas ist los?" was heard. However, when

fourteen minutes and a half had sped, and the second man after him had been just given the word, a shout was heard, the crowd at the start melted and De Caters shot up the road at a pace that was simply terrific. Oil working up to the sparking points had been the trouble.

Right here it may be said that De Caters drove a splendid race, and had it not been for his unfortunate delay and the bungling of the Mercedes management in supplying gasolene, he could have closely crowded the winner. As it was, all credit to him for one of the nerviest, most skilful pilots that ever clutched the wheel of a racing car.

When Jarrott was given the word two "bloomin' Britfishers" who were standing beside me nodded gravely to each other over their pipes, and then, "You don't jolly well hear any smashin' of gears there, Johnny, old boy." "Quite right, old chap; he's a right good sort, is Jarrott," and then they both bowed in unison and smoked reflectively, but the race and all concerning it suffered a temporary eclipse a moment later, when they were joined by a third "B. B.," who hailed them with a "I say, where are you men going to grub?" I left before a decision was reached.

The last man away, the crowd settled back, and then, like magic, a scene was enacted which vividly brought to mind what land we were in. Oceans of beer were suddenly loosed; in the boxes there was also some



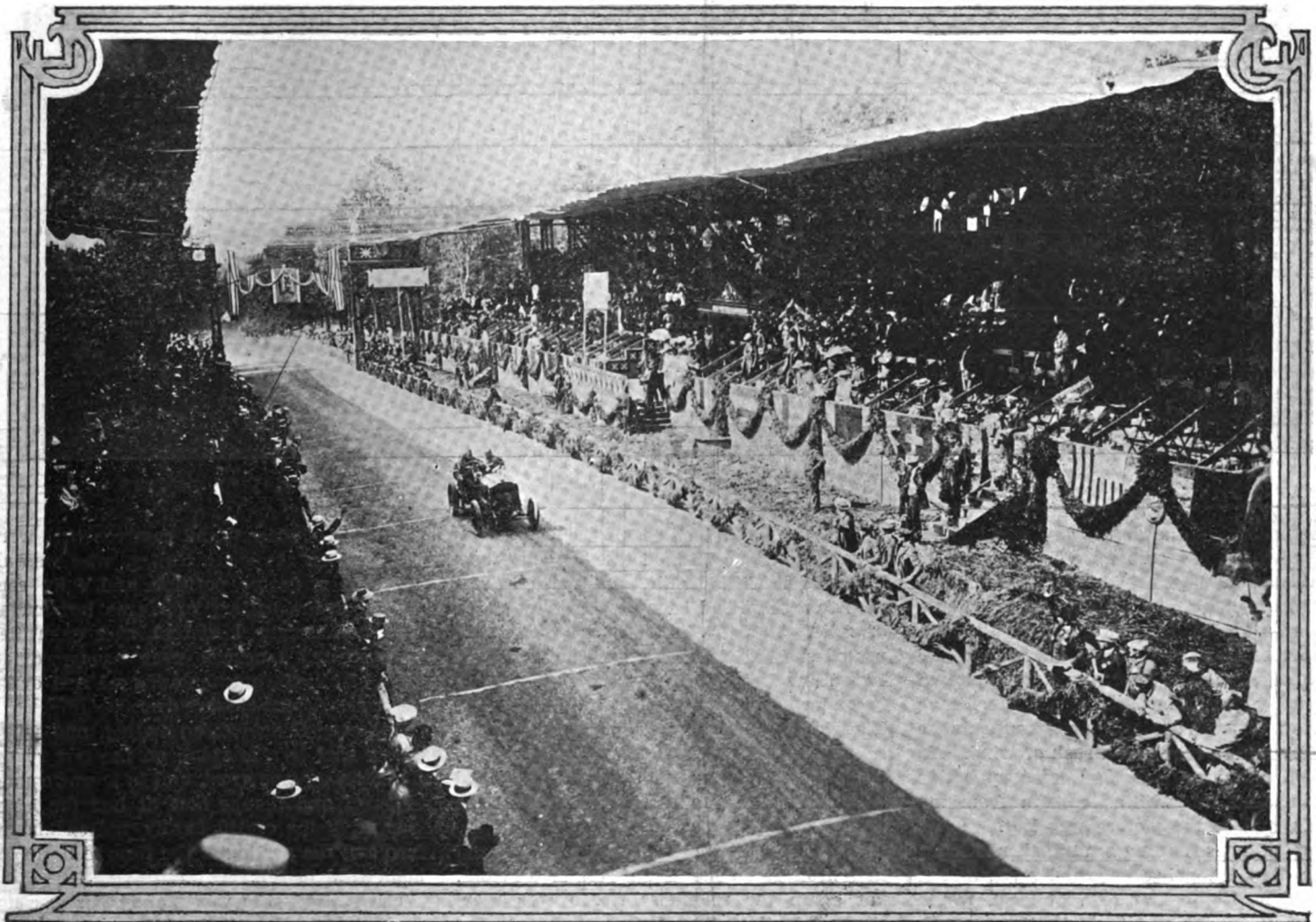
Thery (Richard-Brasier) wins the Cup for France.

wine, but beer was everywhere. It seemed that every man, woman and child not already provided for was hastening to be supplied, but the majority of glasses seemed to have suddenly sprung from nowhere, the amber and white glistening in the sun all along the line—and how it was relished!

Below the starting point the road unfolded down a long, fairly straight hill; so, through the woods, I proceeded, hoping to catch a snapshot of Jenatzy, who was nearly due on his first round. Meeting a line of peasants and being still within the 30 mark, or \$7.50 inclosure, I wondered where they had come from, as soldiers and police were so thick it seemed impossible that they could have broken through the tightly drawn cordon by climbing the wire fence. Following with the eye the rapidly growing line I saw it disappear in a hollow below the side of the fence further along. As my path lay this way, I proceeded, and there, issuing from an arched drain that tunnelled the street was a stream of men, women and children. The roof was not over four feet high; yet from this hole in the ground some portly "Frau" backed out, stern foremost, followed by some fat, spouting and perspiring "Herr," who came forth doubled up like a jack-knife, and so on one after another. It was a sight for the gods. Hard by, standing like wooden Indians, were two soldiers, appar-



THE KAISER WATCHING THE FRENCHMAN WIN.



GENERAL VIEW AT THE FINISHING POINT AS THEY COMPLETED HIS LAST ROUND.

ently unconscious of the whole proceeding. Their instructions had been to prevent people from climbing the fence, but their orders said nothing concerning people coming in from under the street.

But to return to the subject of the race. I had just reached the desired position when a scurrying dark spot appeared, the warning trumpet call was heard afar, was taken up close by, then passed to the stands, and through the field glasses a racing car was discernible fairly flying over the ground, swaying from side to side like a ship at sea.

Suddenly a machine flashed into view, travelling at a terrific gait, yet seeming to skim along the ground rather than to be driving over it. It was No. 5, Therey. He was past like an arrow, taking a sharp curve at full speed, while a chorus of cheers from the stands greeted the man who had first passed those who had started before him. With his time but one second slower than Jenatzy, the pacemaker, on an eighty-five mile run, there were already indications that the battle royal would be, barring accidents, between these two daredevil drivers; and so it

fore the figures went up the waiting crowd knew that this blue car had gained. When the time was bulletined and showed that Therey had gained over two minutes, the French contingent went wild. It was here that Mr. Clarence Gray Dinsmore told me he feared Therey was a danger, but remarked that there were yet two more rounds to go.

Mr. Dinsmore, it will be remembered, owns the car Jenatzy drove this year, and likewise owned last year's winner. The hours dragged by, for drag they did, despite the fact that tedium was eased by watching the



THEREY AWAITING THE SIGNAL TO START; HIS MECANICIEN CRANKING THE RICHARD-BRASIER ENGINE.

A moment more and the figure 1 was legible, and then the car was upon us—Jenatzy in it, leaning far back, rigid, his lips puckered, sucking in air like a boy trying to whistle "inwards," while his staring eyes, his monstrosity of a cap, and, above all, his goatlike tufts of reddish whiskers, sparsely strewn and not hiding the palor of his face, gave him an uncanny Satanic appearance as he flew by with a roar and a rush of wind. An excited individual who had come up beside me knocked the waiting camera from my hands, and so the picture was lost.

Ten minutes or more and then No. 2, Edge, flew by, going in grand style, and it seemed as if the first few, at least, would return in the order in which they started.

proved. From this time on the bugle calls announcing the coming of the machines were heard every little while, and when it was seen that there had been no accidents a sigh of relief went up. Later, when the time posted showed that the race was really between Jenatzy and Therey, speculation as to breakdowns became rife, and hopes of Therey's disablement were often heard, for it was apparently realized that in the intrepid French driver the idolized Jenatzy had met a man who was at least his equal in the death defying game.

When Jenatzy appeared first, the second time around, a torrent of cheers broke loose, but again the relentless No. 5 was seen, closer this time than before, and even be-

hundreds of glasses and cameras that were focussed on the great Kaiser, who was always in a posing position and fully conscious of the battery of stares levelled at him, and despite also that vast quantities of beer and luncheon were consumed; in spite of all, the moments lagged and every one was wishing it were over.

But everything has an ending, and when Therey shot by the stand on the last round the cheering was great, and in it was a note of relief and thanks that at last the issue was near; the crowd hardly waited his return and the posting of the time to begin its homeward march.

The Kaiser, who was plainly bored, courageously stayed until the end, and then, call-

ing the committee of the French club before him, gracefully congratulated France on her victory.

There was no question, however, that the defeat was a great blow to the Germans' pride. Before the race they were openly, arrogantly confident, and made no secret of their satisfaction at the chance, so they believed, to "beat the Frenchmen," whom they regarded, rightfully as it proved, as the real competitors. When defeat overtook them, instead of accepting it manfully, the claim was put forth that it was due to faulty organization at the controls; that Jenatzky lost between thirty and thirty-five minutes in this way—enough to have changed the result of the race and returned him a winner.

This statement was made to me by a man high in the councils of the Mercedes company. I asked Jarrott about it, and he scouted the idea, saying, like the sportsman he is, that They won the race fairly and squarely; that while Jenatzky did probably lose some minutes at the controls in one case on account of running past one, the time was not enough to have effected the result of the race, and that a good car, a good driver and good luck had won, and to They all credit was due. Others of the contestants expressed similar views, so it seems likely that the Mercedes people would do better to stand pat on the really splendid showing of their product than to try to explain away or detract from the victory honestly won by They, whose time by rounds proves the splendid consistency of his running.

Speaking of Jarrott, his courage in the face of difficulties was indomitable. He had about every accident and trouble a man could have, and yet he brought his car through as he had promised to do. For one thing, he lost no time at controls in taking on gasoline, for, heading the others, Windsor T. White and his brother, Mr. Walter White, of London, worked like Trojans at the controls, themselves carrying the precious fluid and filling the tanks in the least possible time.

The opinion is expressed in well informed quarters that next year controls will be eliminated altogether; that it will be a question of quickest time around the course, and that fuel can be taken aboard when taking corners or during necessary slowdowns with practically no loss of time.

The splendid uniformity of running of all the cars, the fact that so large a percentage came through, is itself eloquent of the advancement of the art of automobile building and the reliability and stability attained, but these very factors in themselves may help sound the knell of automobile racing, for the world now knows that it is simply a question of power, driver and good fortune that return a winner in a contest such as the international cup race; and that the first named factor can be furnished by any reputable builder in amount far more than the average man would dream of employing. And so the winning of such a contest may not bring enough returns in the way of en-

anced reputation, as evidenced by sales, to justify the enormous expense of competing, and this in itself would quickly settle the fate of automobile racing.

Automobile makers do not race for fun.

F. W. R.

Want to Tax Newark Autos.

Automobile owners of Newark, N. J., will this year add considerably to the income of the city if the taxing authorities carry out a plan they have in contemplation to make the assessment on the machines an important part of the tax levy.

There is an effort being made by the finance committee of the Common Council and the tax board to gather every available dollar that is possible owing to a deficiency in the expected income this year of the city and the increase of expense caused by bond issues. Ordinarily, comparatively little attention is paid to vehicles owned by residents unless of an especially elaborate nature. Single vehicles have been frequently neglected, but the automobiles represent large investments and the law requiring the registration of the machines with the Secretary of State gave the opportunity to locate them definitely.

There are between five hundred and six hundred machines in the city, it is estimated, and if the average value of an automobile is placed at \$700, taxes may be collected on a total valuation from this source of about \$350,000, which will yield a tax of more than \$8,000 and thus make up in some part for the loss of taxes that has occurred in other ways.

When the members of the finance committee were wondering how they were to meet all the calls for money without raising the rate to a large point, the proposition was put out to pay special attention to the automobiles, particularly as the machines and owners' names were all registered. Copies of the names of the Newark owners were obtained from the office of the Secretary of State.

Bibulous Motorist's Feat.

"Stunts" of many kinds have been done with automobiles, but it remained for a bibulous Buffalo (N. Y.) man to drive one into a hotel and almost up to the bar in the endeavor to more easily slake his thirst.

It is related that the motorist, whose name could not be learned, came whizzing around the corner of Main street, Buffalo, and up to the entrance to the Iroquois Hotel. He stopped for a second at the porte cochere, and then manoeuvred his Northern touring car to the north side of Eagle street and backed and filled until he had its radiator front pointing directly for the entrance to the hotel lobby.

Then he slow speeded ahead, bumped the curb, rose over it, crossed the sidewalk and made his way into the hotel lobby to the amazement of all beholders. Between the huge pillars in the centre of the lobby he steered for the entrance to the barroom. The doorway to that haven was too narrow to

admit the machine, so he stopped it and let it pant like a freight engine going up grade, while he calmly walked in and ordered a drink at the bar. Then he got into his car and actually backed it out, avoiding the pillars and going backward through the narrow doorway into Eagle street.

Fishers Score at Dayton.

In the automobile races at Dayton, Ohio, on July 4, the Fisher brothers, Earl and Carl, had a field day, beating Earl Kiser and Barney Oldfield.

In the three-mile event for cars in the 2,000-pound class Earl Fisher, in a Pope-Toledo, was first, with Earl Kiser second and Barney Oldfield third. In the five-mile stop-and-start race, for machines in the 2,000-pound class, Earl Fisher again won from Kiser and Oldfield.

A record for 2,000-pound machines carrying four passengers, was set by Earl Fisher in the pursuit race. He won from J. V. Platt and R. M. Rainey, of Dayton, going the five and one-half miles in 7:08.

Carl Fisher, driving the Premier Comet, won a three-mile match race from J. D. Winchester, of Syracuse, N. Y., and incidentally lowered the Dayton track record for a mile from 1:37 to 1:19.2-5. The track is a one-half course.

Pittsburg Contest Won by Webb.

Forty-four machines were entered for the hill climbing contest at Pittsburg on July 2. The course was Heberton avenue, over a course one-third of a mile long with a grade varying from 7 to 22 per cent. The machines in each class were started two at a time, and the winners of the pairs competed in the finals. The result of the finals were as follows: First class, won by John A. Pietsch, time, 1:31; second class, W. W. Murray, 1:01 4-5; third class, W. S. Mellon, 1:24 2-5; fourth class, W. L. Dixon, 1:45; fifth class, H. C. Fownes, 0:52 2-5; sixth class, H. C. Fownes, 0:52; seventh class, T. B. Riter, 1:00; and eighth class, C. Webb, of Cleveland, 0:38. Webb, who drove a Pope-Toledo car, made the fastest time and won the contest.

The officials included: W. C. Temple, referee; William Dixon, A. R. Neeb, William I. Mustin and J. S. Lanahan, timekeepers; George Turner, starter; and H. C. Frick, scorer.

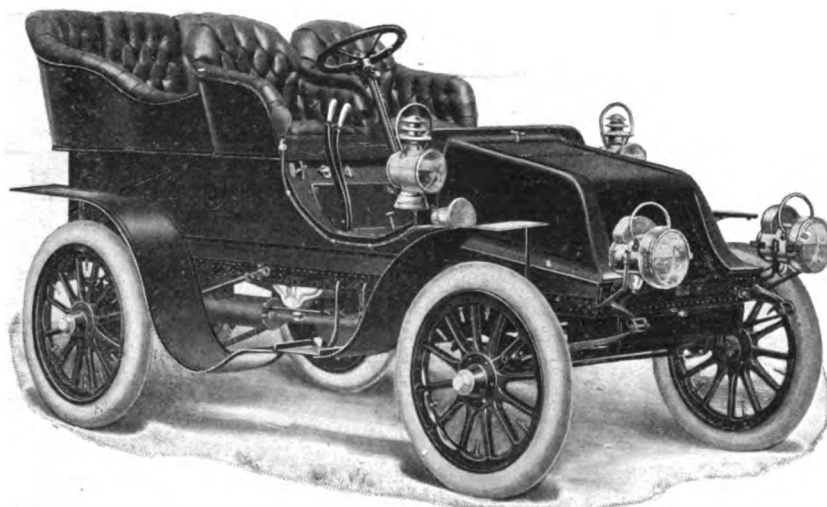
Dinsmore in Vanderbilt Race.

It is the intention of Clarence Gray Dinsmore, the A. C. C. representative to the German Automobile Club, to participate in the Vanderbilt cup race. To the Motor World representative, just after the Bennett race, he stated that he would bring his Mercedes racer, which had been driven in the race, to America, and drive it in the initial Vanderbilt race.

White Metal for Contacts.

White metal is now being largely used abroad for contact points, and while very much cheaper than platinum, is said to be as effective.

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WORK FOR GOOD ROADS

Committee of A. C. A. Deals Out Alternate Praise and Criticism to Local Officials.

Evidence of the alertness of the good roads committee of the Automobile Club of America, of which Albert R. Shattuck is chairman, was furnished last week when the board of governors adopted the following string of resolutions and sent them forth for the good they might do:

"Resolved, That the attention of the Hon. George B. McClellan, Mayor of New York, be called to the numerous grade crossings now in the city of New York, and particularly to those which are not protected by gates; and to the fact that a few weeks ago a serious accident occurred in Van Cortlandt Park because there were no gates, and that the Mayor be requested to use his influence to do away with the grade crossings in the city of New York, and that as this cannot be done at once that all crossings be as soon as possible provided with gates.

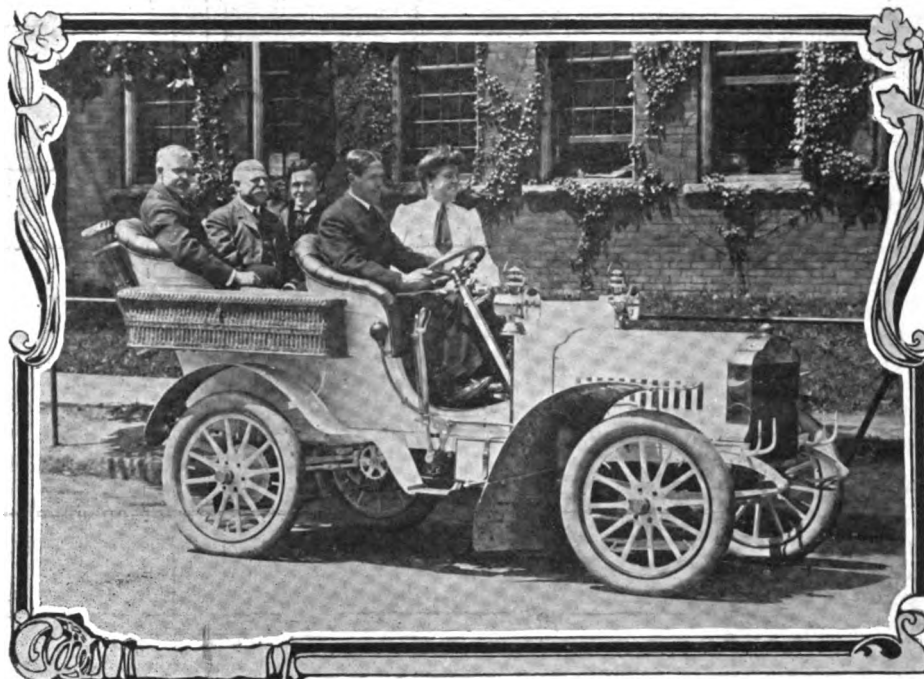
"Resolved, That the governors and members of the Automobile Club of America thank the Hon. L. F. Haffen, President of the Borough of The Bronx, for his bringing about the paving of Jerome avenue with asphalt from the Central Bridge to 185th street, and particularly for doing away with the very objectionable crosswalks where the avenue is being repaved; that the attention of the president be called to the condition of Jerome avenue north of 185th street, and particularly in the vicinity of the new reservoir. At some points near the reservoir the macadam has disappeared entirely; at other points the road is full of holes and is dangerous; that President Haffen be requested to have the portion of the avenue referred to put in proper repair so that a continuous drive over good road can be had from New York City to Westchester County via Jerome avenue.

"Resolved, That the attention of the Hon. John F. Ahearn, President of the Borough of Manhattan, be called to the numerous grade crossings in that borough, and that he be requested to use his influence to do away with these crossings as soon as possible, not only because of the danger to the drivers of automobiles, but the danger to the users of horse drawn vehicles and foot passengers; that inasmuch as this improvement cannot be completed at once that the borough president use his influence to cause the erection of gates at all crossings which are not so provided in the Borough of Manhattan.

"Resolved, That the attention of the Hon. L. F. Haffen, President of the Borough of The Bronx, be called to the numerous grade crossings in that borough, and that he be requested to use his influence to do away with these crossings as soon as possible, not only because of the danger to those driving automobiles, but the danger to the users of horse drawn vehicles and foot passengers; that in-

asmuch as this improvement cannot be completed at once, that the borough president use his influence to cause the erection of gates at all crossings which are not so provided in the Borough of The Bronx.

"Resolved, That the attention of the Hon. Joseph Cassidy, President of the Borough of Queens, be called to the numerous grade crossings in that borough, and that he be requested to use his influence to do away with these crossings as soon as possible, not only because of the danger to those driving automobiles, but the danger to the users of horse drawn vehicles and foot passengers; that inasmuch as this improvement cannot be completed at once, that the borough president use his influence to cause the erection of gates at all crossings which are not so provided in the Borough of Queens.



MR. AND MRS. RANSON, OF CLEVELAND, IN A PURE WHITE, GOLD-STRIPED THOMAS FLYER.

"Resolved, That the attention of the Hon. George Cromwell, President of the Borough of Richmond, be called to the numerous grade crossings in that borough, and that he be requested to use his influence to do away with these crossings as soon as possible, not only because of the danger to those driving automobiles, but the danger to the users of horse drawn vehicles and foot passengers; that inasmuch as this improvement cannot be completed at once, that the borough president use his influence to cause the erection of gates at all crossings which are not so provided in the Borough of Richmond."

Big Registration in London.

Up to July 1, 3,619 automobile and 2,606 motorcycles had been registered in the city of London.

Since the passage of the new act licenses to drive have been issued to 8,933 persons, and 267 dealers have received number plates bearing the red sign of the trade.

PROTEST AGAINST PERSECUTION

Hartford Motorists Adopt Resolutions Asserting Rights of Motorists—Pledge Good Behavior.

Hartford motorists, speaking through the new Automobile Club of Hartford, have uttered a vigorous protest against the persecution that has been visited on them for a number of weeks past. At a meeting of the club, held last week, the following resolutions were adopted:

Resolved, That the Automobile Club of Hartford hereby places itself on record before the public as intending to see that none of the rights and privileges of its members in their lawful progress on the highway are

in any way curtailed; as being, however, vigorously opposed to all reckless and careless driving of automobiles; as being unanimously in favor of respecting all rights and privileges of all other users of the roads and being determined to punish or suspend any members continually trespassing upon the rights of others, or persistently violating lawful statutes or ordinances.

The matter of road rights was discussed, and the general opinion was that there is unjust discrimination against the use of the public highways by automobiles and autoists are restricted in their legal rights and privileges. The club voted to become incorporated in order to protect the rights of the members.

The annual dues were fixed at \$10, and the chairman of the committee on runs was authorized to arrange for one for the near future.

Alderman George Lonstorf, of Milwaukee, Wis., will tour from that city to St. Louis, accompanied by four friends.

EAGER FOR MOUNTAIN TOIL

Two Score of Entries for the Climbing Contests up Mt. Washington.

On Monday of this week the entries closed for the hill climbing contest up Mount Washington, which is to be held on Monday, Tuesday and Wednesday of next week. The number of entries received was a cause of surprise all around, there being no less than forty on hand, and all well distributed among the eleven classes scheduled on the programme. Even the classes for motorcycles filled well, three of these machines being entered by C. H. Metz alone.

Among the entries received are those of the White Sewing Machine Co., Ford Motor Car Co., Stanley Motor Carriage Co., Phelps Motor Vehicle Co., Oldsmobile Co., E. R. Thomas Motor Car Co., J. Stevens Arms & Tool Co., Winton Motor Carriage Co., Waltham Mfg. Co., Crest Mfg. Co., Haynes-Apperson Automobile Co., Consolidated Motor Car Co., G. N. Pierce Co., Packard Motor Car Co., United Motor Corporation, Prescott Automobile Co. From among the owners of the big cars entries have been made by H. S. Harkness, Nathaniel Huggins, Jr., H. L. Bowden and Harlan F. Whipple.

Manager Morgan said that forty entries would be all he could handle in three days, and that he wanted no more. He will run off the price classes first and then the weight classes, starting with the lowest prices and weights and continuing in order to the highest. The free-for-all will wind up the tournament on Wednesday.

The two days' tour of the White Mountains will follow the climb. There will be gold, silver and bronze medals awarded for efficiency on the basis of 100, 75 and 50 per cent. There will be pacemakers. An orderly procession of automobiles through the White Mountains will be aimed at.

Chicagoin Tour Through Wisconsin.

Fifty members of the Chicago Automobile Club left Chicago on July 2 in twelve automobiles for a four day tour of Wisconsin, which will take in many of the summer resorts, including Oconomowoc, Waukesha and Geneva Lake.

The first stopping place was Milwaukee, and Oconomowoc and Waukesha were the next objective points. On Sunday Lake Geneva was to be visited, and Monday night the party expected to dine at the Evanston clubhouse of the organization.

Senators to Inspect Highways.

A committee of the New York State Senate, consisting of Senators Allds, Armstrong, Stevens, Foley and Bailey, will inspect the improved highways of Long Island, Staten Island, New Jersey, Connecticut and Massachusetts. The inspection will take one week, and will begin on July 11. The tour will be made in automobiles furnished by the Automobile Club of America. The legislature appropriated \$3,000 for the use of the committee.

Intelligence as well as Knowledge.

There has been considerable discussion recently in one of the English papers as to the real knowledge possessed by men in Great Britain and the Continent who secure positions as automobile drivers or mechanics and claim to have special knowledge of various makes of automobiles from having spent some time in the factories. One of the correspondents brings out the very interesting point that a man might work a long time in a factory and even then might be able to make certain parts all right, but when "set to find out why an engine has lost power, or why it runs hot, you will soon find out whether he would make a good man to be intrusted with a car," says a writer in a contemporary.

This is a matter which illustrates the difference between being able to make something a foreman has ordered a workman to make, and being able to do what the foreman himself does; know the machine from first to last, the how and wherefore of it, and what to do in case anything goes wrong. The writer has seen a man in a factory attempt to start an engine and fail. On asking him what he supposed prevented the engine from starting, he would reply blankly that he "didn't know," leaving an inference that he didn't care to know, either. I have seen, not merely one man, but a number of men do this, and all of them would be regarded as good men in the factory. It must not be thought that this condition exists in any great degree, but it does exist to some extent, and exists to a greater extent among the users of the machines.

For instance, the user of an automobile finds that under certain conditions his machine does not seem to have the power that it did when first purchased. It uses more gasoline, and yet fails to climb even a moderate hill as easily as it used to go up a more difficult one. How many users know how to attempt to locate the difficulty? Too many simply say they don't understand it and let it go on. Others either take the machine to a competent man for examination or else attempt to find where the trouble is themselves.

Indianapolis Hill Climb July 15.

Indianapolis is to have a hill climbing contest. It will be held about July 15, under the auspices of the Indiana Automobile Club, of that city.

The five-mile hill on Michigan Road will be the scene of the contests. The conditions at that place for such a contest are ideal. The hill is close to the city, but situated so that accidents will be practically impossible. Every precaution will be taken to warn vehicles that approach either from the north or the south.

College Professor on Tour.

Prof. J. Madison Porter, professor of mechanical engineering in Lafayette College, is on a tour from Cleveland, O., to Philadelphia in his new four cylinder Winton. Professor Porter left Cleveland on Wednesday, and reached Buffalo, a distance of 210 miles, in the fast time of ten hours.

"COLLEGE" FOR CHAUFFEURS

Practical Work Done at Locomobile Factory in Teaching Proper Handling of Cars.

Many young men are taking advantage of the opportunity afforded by the Locomobile Company of America to learn a pleasant and lucrative occupation, through its school of chauffeurs, which it maintains at its plant at Bridgeport, Conn. Students are taken into the factory and taught and those who become proficient are recommended to purchasers of automobiles who desire chauffeurs.

The student chauffeur is required to spend one month in the factory, without pay. During that period he is instructed in the repair shop and other departments of the plant where he can best familiarize himself with the mechanism of the machines. After spending a month inside, the student is then given a month outside, acting as demonstrator. In the event of anything going wrong on the road he is supposed to be able to remedy it himself.

The value of practical tuition of this sort is easily demonstrated. The salary of an expert chauffeur varies according to his ability. Good ones get as much as \$25 to \$30 weekly, while others who don't take hold, but manage to run a machine after a fashion get as low as \$10 per week. A clever chauffeur will more than save his salary for his employer in avoiding big repair bills. An instance in which a Bridgeporter recently purchased a Locomobile and inside of three months he incurred a repair bill of \$500. He employed a second class chauffeur. Another out-of-town man bought the same kind of a machine and rode in it with a first class chauffeur to a city in the Middle West, and by careful handling of his machine by his chauffeur it has not yet been inside a repair shop.

Frequently the chauffeurs get opportunities for many long pleasure trips. One young man who graduated recently from the Locomobile Company's school was hired to drive a wealthy man and his family from New York to St. Louis, and after spending two weeks at the fair they will continue on to the West. The trip includes all the points of interest in the West, and the party will return to New York from the South. They will be gone all summer. The chauffeur gets \$25 per week and all expenses paid.

Quite a number of students come to Bridgeport from out of town, and occasionally the owner of a machine will take the course in the factory for his own enlightenment and be his own chauffeur.

Stubb—Now, that's what I call nerve. The idea of that doctor making calls in a motor car!

Penn—Nerve? Why, I think it is very enterprising for a doctor to use a motor car.

Stubb—But he's a horse doctor.—Exchange

RAILROAD'S MOTOR CAR

Illinois Central Builds One for Inspection
Purposes—Seats Twenty-four Persons.

What is described as a distinct innovation in private cars for railway officials is the electric automobile car that arrived in Waterloo, Ia., last week carrying a party of Illinois Central officials, under the immediate direction of H. U. Wallace, chief engineer of the Illinois Centray system. The inspection car was making its first trip, having but recently been completed at the Burnside shops.

The car is only about twelve feet long, but it has a seating capacity of twenty-four. The car is propelled by electricity, the motor being in one end of the car. On each side of the motor is a seat, which holds three. Back of the ends of these two seats are three other seats, with a capacity of five each. The car is low down on the axles, the bottom of the car being only two feet above the track. The seats are finished in green leather, and the roof of the car and the woodwork are also painted green. The roof is made of leather, and has much the same appearance as a carriage top.

The motor of the car is a very large one, and is placed on the floor of the car. The man who controls the motor sits at the side of it. The car is an admirable one for its purpose, as a high speed can be maintained and a large party can be seated comfortably in the car, as the top shades the view of the track and the surrounding country. The seats are placed so that they can be faced either way.

The car is especially adapted for observation purposes, and was built for Chief Engineer H. U. Wallace. The construction was done at the Burnside shops, and was finished the latter part of last week. It is the only car of its kind in possession of Illinois Central officials.

When the automobile makes a trip it is necessary to take along a conductor to pilot the car. Train orders, meeting orders, etc., are received the same as on a regular passenger train. No fireman, engineer or brakeman is required.

Perambulating Hospital for Chicago.

An automobile hospital, consisting of an automobile ambulance of mammoth proportions ready to bear nurses and physicians post haste to the scene of an accident, will be built and equipped by the Harvey (Ill.) Medical College Alumni Association and made part of the Iroquois Memorial Hospital, at Chicago.

"We expect to make this our special work," said Dr. Scott T. Petrie, president of the association. "The automobile hospital will be used for downtown districts, and will take care of any accident that may occur, giving

aid to the injured on the spot. We expect to have nurses and physicians always ready. It will be used by the Harvey College until the Iroquois Memorial Hospital is built. As soon as that is done the automobile hospital will be presented to the Iroquois hospital.

"A movable hospital is needed. A great many lives will be saved by the prompt aid it will give. It will be always ready for a call. We expect to push the thing straight through without any delay."

For White Mountain Climbers.

With characteristic enterprise the G. & T. Tire Co., of Indianapolis, offered to the White Mountain Roads Improvement Association a magnificent and typical trophy, emblematic of the mountains, a cup standing nearly a foot high, made of sterling silver.



G & T CUP FOR MT. WASHINGTON
CONTEST.

The ornamental work on the cup is of elaborate design, embracing vine and floral etchings. This cup will be presented to the driver making the best record, independent of class, in the climb up Mount Washington, N. H., on July 11. A similar cup will be given year by year by the same company, to be known as the "Record Climb to the Clouds Cup."

Good Feeling Among Dealers.

As indicating the good feeling that prevails along "Automobile Row," a conversation overheard by a Motor World man on Thirty-eighth street, this city, last week, was illuminative. A customer dropped in and asked for "one of those spark plugs I got before."

"We are out of them at present, although more have been ordered and should be in to-day. But if you are in a hurry for it you can just step across to Miller's and get one there," replies the salesman.

"Miller's? Where is that?" the customer asked.

"Just across the street—Charles E. Miller, who retails all kinds of automobile supplies," was the reply. "Ask for the soot-proof plug; that is what you want."

RIVAL FOR LOCOMOTIVE

Powerful Gasoline-Electric Car Made by Burlington Road May Oust Steam Engines.

There is now being constructed in the shops of the Burlington road in Aurora the most powerful automobile ever designed. The new machine will be of 200 horsepower, and will be capable of hauling at least three loaded passenger cars and eight or ten freight cars.

This is the first time any of the big railroads of the country has taken up the automobile as a power. Several months ago a leading automobile manufacturer called upon General Manager Delano of the Burlington in Chicago and assured him that an automobile for railroad purposes could be built. Mr. Delano began to figure upon the proposition, and came to the conclusion that his company could build a railroad automobile. Accordingly he had plans prepared for an automobile that would haul at least two passenger cars and a short freight train.

Engineers of the company were put to work on the plans, with the result that in about two weeks there will be turned out of the Aurora shops of the company a gasoline-electric motor engine that will eclipse anything ever constructed.

The new machine will be used at first on the branch of the Burlington operating between Fort Madison and Keokuk, Iowa. If it proves successful there fifty more power locomotives will be constructed for use on twenty-five or thirty of the branch lines of the Burlington.

Paraders in Hayseed Costumes.

Asbury Park and Allenhurst, N. J., celebrated the Fourth with an automobile parade. There were some thirty cars in line, including B. M. Shanley, jr.'s, Vanderbilt world mile record Mercedes, driven by its owner. Many of the cars were decked with flowers and bunting. The occupants of one were costumed as "hayseeds," the men wearing harvest hats and blue jeans and the women sunbonnets and calicoes. The route of the procession lay through the two towns. The hotel verandas and cottage porches were thronged with cheering and handkerchief waving spectators.

Glidden Gets Back.

Charles J. Glidden arrived home last week from his automobile trip abroad, where he witnessed the international cup race. He starts out again the middle of this month on the St. Louis run of the American Automobile Association, and will then continue on for his trip around the world.

Moliner's Elect Officers.

Officers and directors of the Moline, Ill., Automobile Club have been elected as follows: President, Samuel T. White; secretary, A. H. Ruebsam; treasurer, B. L. Schmidt, Dr. A. L. Hageboeck, W. D. Peterson, F. L. Bills and T. B. Carson.

COREY TOURS THE CONTINENT

Boston Banker Drives His American Car Through France to Witness Cup Race.

Writing to a friend in Boston, Harry D. Corey, of that city, who is now touring in Europe in his Pope-Robinson touring car, says:

"We left Liverpool on May 30, and drove our car through Chester, Wrexham, Ludlow, etc., to Shrewsbury, where we spent the night, and then on to Monmouth and Chepstow, down the valley of the Wye, which is, to my mind, one of the loveliest parts of England. Then on to London via Gloucester, Oxford and Henley.

"We met the Gliddens in Liverpool, just starting for the English lakes, and at London we met Mr. and Mrs. Morrill and Mr. and Mrs. Cole.

"Last Saturday we ran down to Folkestone and crossed to Boulogne, reaching Abbeville in the afternoon, where we spent the night. Our route then led us south via Rouen and Chartre into the historic chateau district. The roads were in splendid condition, and we rolled off kilometres in 65 seconds (equal to forty-two miles an hour) right along. On one piece of road between Point d'Arch and Vendome we did not find a hill, and for fourteen miles it was like a parlor floor.

"On several days we never stopped our engine until luncheon time, covering from sixty-five to ninety miles, and so far we have not had the slightest thing go wrong. The Robinson has exceeded my expectations for a strictly touring car, and has attracted a great deal of interest over here. Most people think it is a 60 horsepower Mercedes, and on some of these smooth stretches, where you can almost fly if you have the power, I wish it was.

"The scenery in the vicinity of Tours, Chinon, Chinonceaux, Blois, Orleans and Fontainebleau is very beautiful. The road along the river Loire is like the surface of a billiard table, and we were sorry indeed when we drew up at the Hotel de France at Fontainebleau. Here we met Mr. W. H. Crane and a party of Americans who had run down from Paris (thirty-six and one-half miles) in less than an hour in a big 60 horsepower Mercedes."

Chief Wants Up-to-Date Equipment.

Chief of Police Millikin, of Cincinnati, Ohio, has applied for a new patrol wagon to replace old No. 2, which has done yeoman service for the department. President Cushing suggested that a modern machine, such as has been practical in other cities, be supplied.

"I am opposed," said he, "to the buying of any more wagons to be drawn by horses. I can't see why Cincinnati should not be as up-to-date in the matter of her Police Department as any other city."

Rival Claims to "Motor."

The term "motor" has been appropriated by the electrical engineers in recent years to designate the electric motor, and it has come to mean—among them at least—an electric motor, almost as specifically as the term "dynamo" implies a machine employed to generate electric currents, says the Electrical Review.

But, with the development of the small gasoline and oil engines for propelling automobiles, the term "motor" is being used more and more in its more general sense. Gasoline and oil engines are now frequently referred to as motors, without any distinguishing adjective, just as is the electric motor, so that there is at times chance for confusion.

This is perhaps a little unfortunate from the standpoint of the electrician, because "motor" is a short, expressive word, and it is inconvenient to be forced always to tack on to it an adjective longer than itself. But it is too late now to make a change by substituting some other word for "motor" when referring to the electrical machine, and when the context does not eliminate all risk of confusion the adjective must be used.

Possibly the difficulty will be overcome if the electric motor succeeds in driving all other motors from the field, the Review concludes in sanguine fashion, oblivious, apparently, of the strides that the gasoline motor is making and the increasing probability that it will dominate the field.

Doherty Waxes Eloquent.

In presenting an automobile to the retiring general manager of a Texas railroad, the orator of the day, William Doherty, indulged in rhetorical flights of eloquence such as merited and received the approbation of his fellow employees. After dilating on the qualities which had endeared the general manager to them, he said, pointing to the automobile.

"But, sir, there she is, rigged in all her glory, capable of transporting you over the rolling prairies, along the picturesque Rio Grande or over the rails of that great railroad you are now building, at the rate of forty miles an hour. There she is; canopy top, cushion seats, electric lights, rubber tires, attired in a coat of gaudy red and every part of her intricate frame, every bolt and every screw represents the love, admiration, regard and esteem of your friends. Symbolical of ease and comfort, may she carry you on toward that goal of happiness and prosperity which if any man ever merits should indeed be yours."

Endurance Run for Californians.

The executive committee of the Automobile Club of California is planning to hold an endurance run in conjunction with the Automobile Club of South California next month. The event is proposed to be an endurance contest and a club tour as well and to be held between San Francisco and Los Angeles.

DOBELLI'S GIANT CAR

Italian Firm Builds Biggest Auto—Develops 180 H. P. and has 11 Foot Wheel Base.

What is without doubt the largest and most powerful automobile yet constructed is being shown at a London, England, establishment. It was built by an Italian firm, Messrs. Dobelli, Rome, and is their first attempt at constructing a fast motor vehicle. In many respects it is said to be decidedly faulty in design, but there are points about it which are interesting and worth attention.

The frame is of armored wood carried upon light steel axles and equal sized wheels fitted with 920x120 millimetre tires, and having a 11-foot wheel base. The motor is built of cast iron throughout, and the four cylinders are cast in pairs, with separate cylinder heads. Its dimensions are 8½-inch bore by 8½-inch stroke, and it is stated that 180 horsepower can be developed. Both the induction and exhaust valves are 4½ inches in diameter and mechanically operated. The former can be given a variable lift at will.

The mixture is supplied by an enormous and specially made Longuemare carburetter, which is connected to the inlet valves by a 4-inch suction pipe. There are two sets of sparking plugs in the top of the cylinder heads, and both high tension magneto and ordinary high tension ignition, with accumulators and coil, are used. An internal cone clutch transmits the power to a Panhard type gear, having five speeds forward and one reverse, and operated by the same lever. The sprocket pinions and sprocket rings are both the same size and have twenty-five teeth. Ordinary roller chains are used, and there are ordinary double acting brakes on the differential shaft and the road wheels. The radiator consists of oval shaped tubes with spaces in between each through which air is drawn by means of a chain driven fan.

Fixing Hiring Rates for Autos.

The matter of regulating fares for automobiles in San Antonio, Texas, which is in the hands of the city council, is creating a great deal of interest among hackmen and owners of vehicles for public hire. Recently the hackmen petitioned the city council to regulate the fares of automobiles and the matter was placed in the hands of the city attorney, who reported on the matter, stating that the city had the right to fix the rate to be charged. In connection with the city attorney's report was received a communication from A. G. Staacke, representing an automobile firm, stating that the expense of maintaining and operating an automobile is more than that required for a hack. He further states that at the present rate charged by his company—\$2.50 and \$3 per hour—it is yet a question whether it will pay.

AUTOS FOR SOUTH AFRICA

Peculiarities of the Country and the Sort of Cars
Required to Cope with Them.

The peculiar requirements of the automobile buyer in South Africa are such as to deserve the closest attention of the manufacturer. The market, a fast growing one, is likely to become very large in the immediate future, and one which should be especially suited for our own capabilities, says a writer in the *Automotor Journal*, London. That is to say, the type of motor pleasure vehicle mostly in request will probably be that so characteristic of British builders—the solid, durable and simple article. It is the long distance touring car rather than the “runabout” which will be called for. And in using the term “long distance” here much more is meant than it commonly implies. Distances from habited place to place are so vast in the colonies as compared with what obtains at home that any motor car of the denomination referred to must, if it is to adapt itself successfully to the altered circumstances, be itself correspondingly modified. Bases of supply are wide apart indeed. Towns are few and far between, and only in the more important of them is it possible even to replenish the fuel tank. As for “spares,” they can be obtained by sending to England, to France, to Germany or to America, but not elsewhere nearer.

There are few features of South Africa more striking to the visitor than the nature of its roads. Generally, the term can be applied as a courtesy only. Outside the towns they are mere tracks. Originally, in places, they may have been cut for their purpose, but it is more reasonable to suppose that their greater length was “engineered” by a long and various succession of wagon traffic alone. By that means, it is certain, they are principally maintained. The surface is a loose mixture of sand and rocks. When dry it is easily raised and fills the air with a penetrating dust—a dust which is hard and abrasive. Wet, it is clinging and heavy. In parts ditches are cut transversely at frequent intervals. These are necessary to arrest the rush of water during the rains and prevent “washouts.” Combined with deep ruts formed by wagon wheels and a fairly perfect disintegration of the countless hoofs of draught cattle, a road is presented which does not invite speed. Gradients are not slight. They require careful negotiation, some being positively formidable. Where a road pursues its course through a mountainous district, it is naturally a sinuous character; and many of the bends are sharp. One finds this particularly on the Durban-Maritzburg route in the neighborhood of Inchanga and Botha's Hill. The road runs for some distance nearly parallel with the railway, but at a considerably higher level. Its curves are acute, its grades steep and its surface is of the roughest. A false motion of the steering hand would probably land one in a state of splinters either upon the railway or, on

the other side, down into a kloof. It is such roads as this which emphasize the absolute necessity of irreproachably sound steering gear.

To illustrate the requirements in the way of transmission gearing, or in the greater elasticity of engine power, the following may be cited. On a recent run from Boston to Maritzburg, approximately twenty-seven miles, it was needful to change gear no fewer than 170 times. The car was an up-to-date, twin cylinder 10 horsepower, one of German manufacture. The distance was covered in rather more than two hours, that time constituting a “record,” and one, let it be said, which will not be readily beaten. Cars geared for high speeds are not wanted in South Africa. It is impossible to drive even moderately fast over ruts and boulders or around such curves as there present themselves. A car geared for perpetual hill climbing is the car that goes furthest on colonial roads. It is, too, the least wearying for its driver and for itself. When it becomes imperative to pedal the clutch and to change gear continuously, the lives of the car and the chauffeur may be said to be perceptibly on the wane. And, although geared thus low on the top speed, it is not the less desirable to provide four changes. These, and the reverse, should be actuated by a single lever.

To be successful, an automobile for the colonies must be more than usually substantial in build. Yet its weight should be comparatively light. Indeed, it should be reduced to a minimum, providing always that the working parts are adequately proportioned. If this is not done, ordinary springs and axles may fail miserably. The jolting and bumping to which a car is subjected is terrific. With a view to minimize the effects of these shocks in running, the wheel base ought to be long. Pneumatic tires are essential, too, toward the same end. With regard to the wheels themselves, it is questionable whether the fashionable artillery type is altogether the best. Wire suspension wheels are far lighter and are more capable of withstanding torsional strains. In a climate, also, where wide ranges of temperature and humidity are experienced, wood is liable to suffer much greater harm than metal.

Fashion may be questioned, again, in its dictates as to the height of a car. When high speeds are not feasible there is no advantage whatever in pitching the centre of gravity so low as is now general. In fact, there are disadvantages. Home motorists have had occasion at times to drive through flooded stretches of road. We believe that it has happened more than once that cars have been brought up like artificial desolate islands owing to wet “shorts” in their electrical economy. On a higher built car the water could have caused no such trouble. In South Africa, it must be remembered, there are drifts to be crossed. If a car be hung very low it is a sporting chance whether it will make the opposite side of one without the aid of a friendly team. The average depth of water is a mere trifle, it is true; but, as the bed usually is uneven and rocky, splash and surge is inevitable in crossing,

and the natural consequence may be a general failure of the electrical circuit. There is, too, another and really dangerous drawback. The front axle, if very near the ground, may strike upon a piece of rock and bring about complete wreckage. It were better, perhaps, for the designer to adopt the lines of the greyhound rather than those of the basset, of which he appears too fond.

All brake gear and sprags must be of the highest possible strength and efficiency. The brakes should be, of course, double acting, and amply powerful enough to hold the car, fully loaded, on grades of 1 in 6-4. Such tremendous slopes may be encountered when least looked for, and a failure of brakes would be disastrous.

In connection with the cooling arrangements, a few words will suffice. Adequacy should be the keynote for the designer. Water is often difficult to procure, and a car should, therefore, carry a supply sufficient for very long runs. The radiator must be efficient. It should serve to keep the water well below boiling point—unless condensation can be effected—so that loss by evaporation may be small. The temperature of the atmosphere is frequently as high as 110 degrees Fahr. in the sun, and sometimes as high as that in the shade. This must be taken into consideration. A fan to induce draught over the radiating surface is practically indispensable. As has been said, high speed is impossible, and, consequently, natural currents of air are insufficient to dissipate the waste heat. This was demonstrated most forcibly only a few weeks ago. A car had been driven a distance of but five miles when it was found that the water tank had become exhausted. On pouring in a fresh supply, it hissed and boiled furiously on reaching the overheated cylinders, and some apprehension was entertained for their safety.

The fuel tank, also, must be of ample capacity. For general purposes, no car should be sent out with a tank which is incapable of holding fuel for 150 miles at least. If it is larger, so much the better. It must be assumed that the throttle will be open wide on the longer portion of that distance.

A generous assortment of spares ought to accompany every machine exported. This should include many parts not ordinarily considered spares. Any fitment upon which much wear devolves, or on which depends perfect running, should have its duplicate in the locker. The initial cost of these additions will not be objected to. Experience has proved that renewals and repairing effected locally represents far greater expense. One car, for example, has cost its owner little short of two pounds weekly during several months for sundry tinkering. The fact that he is not yet tired points a moral which makers can see for themselves, and may well take to heart.

Ray D. Lillibridge, the well known advertising man of this city, is touring to the Thousand Islands. He shipped his White car to Watertown, N. Y., and started to drive from there.

HARTFORD'S HORSELESS ENGINES

Connecticut Capital Installed Self-Propelled Fire Fighter in 1876—Others Added.

So common is the assumption or belief that the automobile or self-propelled road vehicle is of very modern introduction that people are in danger of forgetting that one type of the class was in practical use years before the first automobiles came on the market. The self-driven fire engine is the vehicle referred to, and there are a number of cities and towns where it formed part of the equipment of the department and was a customary sight long before an automobile, in the present meaning of the word, was even heard of.

One of these towns is Hartford, Conn., the "insurance town," as it is sometimes termed. The appropriateness of the adoption of improved fire apparatus is therefore obvious. As early as 1876 this type of engine appealed to the fire fighters of the Hartford fire department, who installed an engine in service in February of that year. It was built by the Manchester Locomotive Works, in Manchester, N. H. It was known as a first size, double crane neck Amoskeag.

This engine is still in service as an auxiliary, and has been on duty twenty-eight years. It was designated No. 7, located on Front street.

In May, 1879, a second self-propelling, second size engine was put in service, known as No. 4, on Ann street.

In both of these steamers the single chain drive was employed, the differential being located on the rear axle, which turned. In August, 1889, a third steamer was added to the service and replaced the first one installed in 1876, and was known as an extra first sized, double crane neck Amoskeag, weight 17,000 pounds, pump capacity of 1,250 gallons a minute, the boiler being 40 inches in diameter, cylinders $9\frac{1}{2}$ inches in diameter, pumps $5\frac{1}{2}$ inches in diameter and a stroke of 8 inches. At the first trial this engine threw through fifty feet of leading hose of $3\frac{1}{2}$ inches in diameter a stream 348 feet; through a $1\frac{1}{2}$ -inch nozzle, 338 feet through a $1\frac{1}{4}$ -inch nozzle, 319 $\frac{1}{2}$ feet.

Because of its size it was commonly known as "Jumbo," and for some years was the largest of its type in the world. It was frequently displayed for the benefit of out of town officials, among them being a commissioner of Boston, who, being impressed with the manner in which it worked, immediately placed an order with the builders for a duplicate.

In August, 1901, the fourth steamer of the self-propelling type was put in the service of the Hartford department. Like the one installed in 1889, it was an extra sized, first class, double crane neck Amoskeag, and is a fine piece of apparatus. It is a trifle larger than the one of 1889, the boiler being 40 inches, flaring at the bottom to 46 inches, the grates are 42 inches in diameter; the cyl-

inders of the engine, which will develop 80 horsepower, are $9\frac{1}{2}$ inches in diameter; pumps $5\frac{1}{2}$ inches in diameter and stroke of 8 inches. The entire machine weighs 18,000 pounds, carries a 6-inch suction, can throw 1,350 gallons a minute, and can throw four $1\frac{1}{4}$ -inch streams at once to good effect.

Some conception of the force of this steamer may be gained when it is considered it will penetrate an ordinary brick wall with one of its larger streams. A 100-gallon water tank located under the tillerman's seat supplies water while the engine is on the way to a fire. There are two throttles, one of which is located on the left side of the boiler, which is used when the engine is pumping, and another is located at the right, in the rear of the boiler, and controls the engine while it is steaming on the road; the reverse lever, located at the right, works on a segment, much the same as in a locomotive.

Three sizes of hose may be used, two and one-half, three and three and one-half inches in diameter. Steam is maintained at about 100 pounds while the engine is housed, and when on the road 125 pounds is maintained. A boiler located in the cellar serves a complete circulation of hot water and steam; the boiler of the engine is of the submerged flue type, and is composed of 313 one and one-half inch flues. The engine has two balance wheels, and is capable of twenty miles an hour.

The smokestack, into which the engines exhaust direct, is 16 inches in diameter, and is provided with an extension to afford a better draught when necessary. There is no fire under the boiler when the engine is in the house, but as soon as it leaves for a fire the fire is automatically lighted. In this engine, as in Jumbo, the engines are geared direct to the intermediate shaft, upon which the differential is located; two endless steel chains are employed as drivers, and engage sprockets on the two rear wheels.

Iron spikes, or buttons, set in the tire serve to give the driving wheels a hold upon the pavement. Two compensating rods serve as chain sets, to allow for slack, much the same as in a bicycle. The wheel steering system is employed, the steering post working a series of worm and bevel gearing, the wheel being 36 inches in diameter. In the winter horses are employed for the same purpose, in which case the steering post is simply taken out.

These two engines, being extra sized, are practically equivalent to two or three smaller engines, are indispensable when it is considered that the city has but eight engines in the service, and these two extras are located so as to cover the more densely populated districts of the East Side and the business portion, which fact does not imply, however, that they cover only the centre sections of the city, for it very often happens that they are called on a two or three mile run, being able to leave the house six seconds after receiving the alarm. Despite their great size, they are much cheaper to maintain than a horse engine. It costs the department about \$28 a month to maintain one of these engines, against \$62 for a smaller sized horse one.

SOLVES THE DUST PROBLEM

Nature's Carpet, Grass, Will Eventually Border all Highways and Allay Motorists' Enemy.

There is no doubt that grass is the natural and obvious solution of the dust problem. We may temporize by means of curtains, we may tinker with tar and with oil, but the ultimate of methods will, assuredly, be grass roads with wheel tracks of steel or some other material imbedded in them, remarks *Motoring Illustrated*.

In the day of progress which sees this reform, motor travelling will have rid itself of its one serious drawback, and will be a wholly dignified pursuit. We motorists are growing so used to being regarded as a nuisance that we are in danger of adopting an apologetic attitude. This is a mistake, for the truth is that in many ways we are public benefactors. Not only are we inaugurating an era of easy, rapid and delightful locomotion, by which every one will presently benefit, but our coming means hygiene and road reform in all directions.

The dusty, glaring, hideous highways of to-day, wearying to eye and brain, may be regarded, indeed, as unnatural scars on the face of nature; a constant source of irritation and disease from the dust and animal debris wherewith they load and render noxious heaven's air.

Judging by her persistent methods to softly coat the earth with grass, with moss and other verdure, Nature may be said to abhor dust. Yet we thwart all her efforts and persistently strip off her coverings, with the result that we trudge our way in mud, and load the air we breathe with noxious particles.

Then, presently, when our exasperated lungs inflame and become tuberculous from the irritation of such noxious particles, we, (in most cases too late) fly to Davos or other altitudes where the air is clean and pure and free from such impurities.

In the day of universal grass highways, cool and green, and beautiful to eye and tread, mud and dust will be unknown; springs and rivers will no longer run dry as they are doing now by the wastage of storm water in city sewers, rains being then absorbed and prevented from exhaling by nature's carpet of grass, and tuberculosis and the many lung afflictions so common to-day will cease to scourge.

Montreal Motorists Organize.

Some seventy Montreal motorists met in that city last week and effected the preliminary organization of an automobile club. The following committee was named to prepare by-laws: William Yule, Dr. Irvine, J. H. Dunn, Frank Meighen, J. R. L. Ross, S. A. Bent, G. Boisvert, Dr. Mignault, F. C. Wilson, A. J. Dawes, Duncan McDonald, F. H. Anson, J. Pasquin, G. Birks, F. Redpath, George Simard, A. Berthiaume and A. J. DeB. Corriveau.

LIVERY KEEPER'S COMPLAINT

Automobile's Inroads Cause Him to Give up Horses—Latter are too Slow.

Livery stable keepers have little love for automobiles, and small blame to them. They can read the handwriting on the wall, and, realizing the inevitable shrinkage of their business, they are filled with anything but pleasurable emotions.

There is one of this class, however, who seems to have borne in mind the homely old adage about employing as a remedy the hair of the dog that bit you. He has invaded the automobile field, and will strive to win

not a frisky horse, that is disturbed by a fly or scared by a passing car.

"The expense of keeping up a stable of horses has greatly increased the last few years," May continued. "Provender is high, and no matter how careful one is his animals have to be sent out with those who are not competent to take care of them. A short life in a livery stable puts any horse on queer street, and then patrons refuse to hire them. The extra care and expenses of keeping a large stable in good condition eats away a large percentage of the profits.

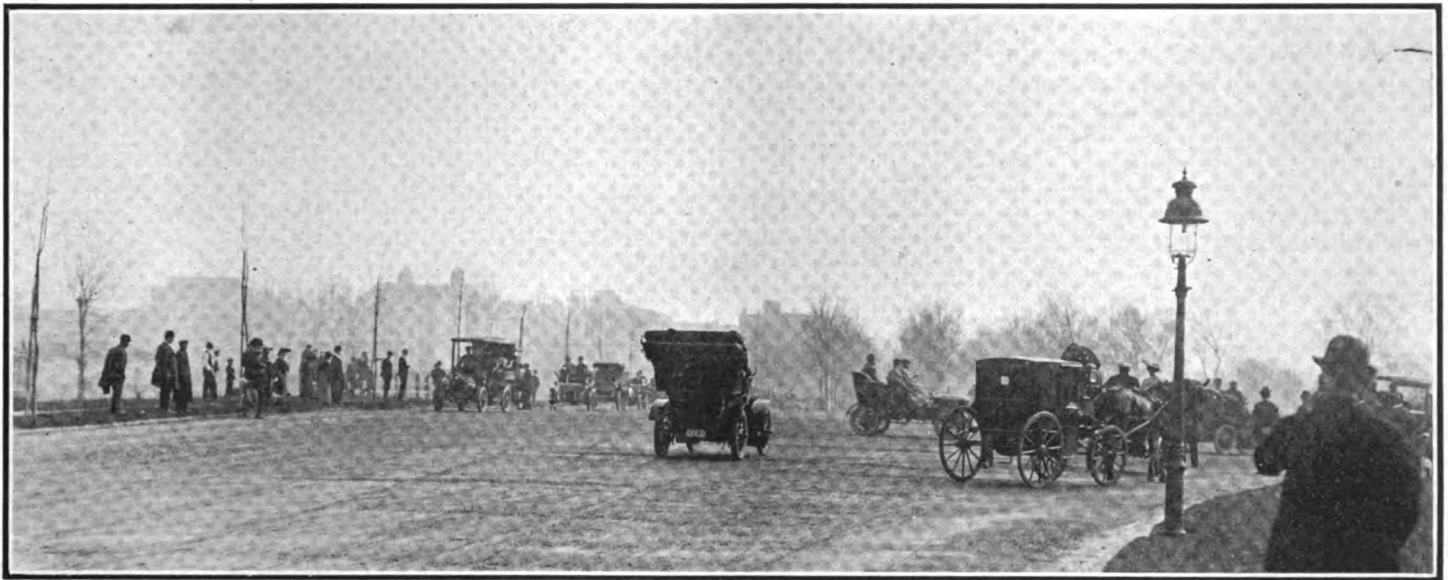
"Now, in the new business things are just the reverse. We will have a repair shop in connection with the livery, and, instead of building up horse tissue at heavy cost, we will patch up automobiles at profit. Besides

HOW FINE GETS TRADE

He Sells License Tags to Jersey Motorists Whose Name he Obtains Mysteriously.

According to recent definitions, "graft" is of many varieties—there is "legitimate graft," "honest graft," "straight graft," "crooked graft," "natural graft," "easy graft," "political graft," "social graft," "religious graft," "business graft" and many more sorts. Some new forms that need classifying have been developed by the recent automobile legislation.

One of these forms is discovered when automobilists apply for registration at the



SCENE ON RIVERSIDE DRIVE, NEW YORK CITY, ON A RAINY DAY.

fortune from the agent which put him out of business. This farsighted individual is D. J. May, of Detroit, Mich. He formerly conducted a livery and boarding stable at Nos. 11 and 13 Abbott street, that city, but he sold out to start an automobile livery. In speaking of the reason for branching out into the new business he said:

"I had enough of the horses during the last decade. It was all right years ago, but the last couple of seasons there has been scarcely a living in the business. People don't care to drive any more the way they used to. It is too slow, I presume, to suit the public of the present day. They prefer to go less often in an automobile, even though the expense is greater, than to make frequent trips by means of horses. An idea of the preference is shown by the fact that they would rather pay \$3 an hour for a machine than \$2 an afternoon or evening for a horse and carriage.

"Then, again, irrespective of the expense, nervous people are not always worrying about a runaway. When one learns to drive a motor car he has himself to depend on and

having machines for hire, this livery and many others which will soon be started will have great stabling accommodations for automobiles of every description. The liveryman will take complete charge of the machines assigned to his care, keep them in repair and deliver them at the owners' residences whenever they are required for use. No doubt the new arrangement will tend to do away with the chauffeur, except in the case of the extremely wealthy, as many of the chauffeur's duties will devolve on the responsibility of the keeper.

"No," May continued, "the day of the horse is not yet over, but things are fast shaping themselves in that direction. The horse will soon be an object of amusement and pleasure rather than a beast of burden, especially in the city. The rich will always cling to him, as will the racing public, for what could take the place of a horse in the heart of the pool sellers?"

Motorists of Salt Lake City, Utah, are planning a floral parade, to take place in July or August. It is proposed to make use of flowers of every description, both wild and cultivated, in the decoration of the cars.

Secretary of State's office in New Jersey. After being properly held up by a commissioner of deeds for witnessing the application affidavit and sending the stipulated amount to the capital seat of Jersey justice, one gets the license certificate promptly by mail, and along with it in the same post from Trenton, in a separate envelope, true enough, but addressed in what looks like the same handwriting as that on the envelope containing the license certificate, comes an elaborate circular from a fine fellow who has numbered license tags for sale. The circular is that of Horace E. Fine, of Trenton, and his wares are set forth in an attractive manner to all who obtain a license. This looks as if the Secretary of State's office is abetting the constables and justices in making automobiling in New Jersey a fine affair all around.

Mr. Fine is located at No. 19 East State street, Trenton, but he seems to be closer to the Secretary of State's office than that would indicate.

A meeting of Dallas, Tex., motorists has been called for the purpose of organizing a club.

Valve Grinding and Emery.

To grind a valve, it is necessary to dismount it by removing the nuts or other means by which it is retained in position, varying according to the make of motor. After withdrawing all the parts and laying them together—keys, pins, nuts and the compression spring—it is seen that the contact surface of the valve is marked with points of black oxide, which prevent it sitting fairly in its seat. Whether it be an inlet or exhaust valve, the effect is the same. Taking one or two drops of oil and a pinch of No. 1 emery powder, a little thick paste is made, which is coated on the seat of the valve. The valve is then placed in position, and, by means of a screwdriver and the slit which is found for the purpose on all mushroom valves, it is turned quickly to the right and left, lifting it occasionally to permit the emery paste to return to the rubbing surface. After a few minutes of this work it is found that the bevelled surfaces become dull and uniform in color, the valve sits evenly, and the contact is perfect. To make sure, pour a little gasoline on the closed valve, and if the least moisture gets through the job is not satisfactory, and a little further grinding is necessary.

When finished, it is necessary to remove from the valve absolutely every trace of emery. Clean and dry the parts touched by the paste, then wipe with a clean rag soaked in gasoline, till satisfied that not a grain of the emery powder remains. Emery in the cylinder in the most minute quantity will cause serious trouble, and it is better, therefore, to devote the few further moments necessary to make sure that the parts are absolutely free from it.

Lubrication of Steering Pivots.

The question of lubrication of steering pivots is rather a neglected one. Recently makers have been drilling the pins and inserting lubricators, but by far the most usual method is to cover the pivots with a leather casing and fill up with grease. Now, if it is at any time necessary to remove the leather there is the utmost difficulty in returning it. The reason is not hard to seek, for when putting the leather on a piece is just twisted round the rod and arm and bound with wire. It is not difficult to arrange this differently so that not only can the leather be taken off and on, but so that it will make a tighter job and retain the grease better. The joints should be studied and the leather cut so that the flat piece of leather is a development of the parts which it has to cover—that is to say, when cut, it will resemble a T somewhat, the tail wrapping about the distance rod and the cross piece folded over and inclosing the steering arm. Two thongs should be left cut diagonally from the junction of the tail with cross piece, these thongs wrapping over and completing the case at the joint.

A reward of \$50 for the apprehension of missile throwers has been offered by the Automobile Club of Pittsburg.

How to Grease Spring Leaves.

Few motorists recognize the necessity for inserting lubricant between the leaves of the carriage springs of the car. It is said that the spiral spring is too lively for car suspension purposes, and that a carriage or multiple leaf spring is the right thing, on account of the friction set up between the plates or leaves reducing the resiliency of the spring sufficiently to bring it down to reasonable non-plunging limits, but it should be remembered that there is sliding motion between the spring leaves, and, consequently, lubricant is a necessity if the motion is to be utilized to the best advantage.

The chief difficulty found in greasing the opposed surfaces of the leaves is in separating them without interfering with the paint.

An excellent tool for doing this is made from a pair of wide smith's tongs set over at the points and sharply wedged to insert between the leaves. By tightly gripping the handles the leaves could be separated one after the other, and the grease smeared between them without the separating agent affecting the paint in the slightest degree.

Settling Down to Work.

When a well designed and constructed car has been run for some time by its owner, and the question is asked, "How does it go?" the reply is, "Better than when I first had it." This is only to be expected in the natural order of things, for the thorough running in of the bearings, gears and axles cannot be properly done until a fair amount of road work is completed, although in most cases they receive a good working in during manufacture in the shops and in the subsequent trial work on the road before delivery to the buyer. Taking the case of an Atlantic liner, it has to do quite a number of voyages before "settling down to its work," as an engineer would phrase it. So with the mechanism of a motor car, a certain amount of work must be done by it before the best results are shown in running, and the speed, quietness, efficiency and general smoothness acquired which characterize the best type of car.

Hunting in Automobiles.

Even the hunter has lately come to recognize the utility of the automobile in the pursuit of his favorite pastime. In this country the automobile is not so generally used in connection with shooting on account of the fact that the roads in the Eastern game preserves are often little better than trails, but on the Western prairies motor vehicles are successfully used for prairie chicken shooting, and even in the hunting of larger game.

As the roads in the Adirondacks and Maine are improved, however, there is no doubt that the automobile will come into wide use in connection with hunting, fishing and camping. In particular, it is likely that the automobile will soon displace the stage coaches which now connect many of the camps and resorts in the Maine and Adirondack woods with their nearest railroad stations, often twenty-five miles or more distant.

The Art of Towing.

When the necessity arises for towing a car home care should be taken to prevent doing the towed car damage. The attachment to the drawing vehicle or animal may be made by means of any kind of rope, but the points of attachment should be to the car itself, and not to the front axle. Traction by the axle would have the effect of straining or bending the springs, while traction by fastening to the chassis does no harm, provided proper care is exercised to prevent the towing ropes at turnings, or when going up or down hill, coming in contact with and injuring the comparatively fragile accessories placed in front of the car.

The driver should remain in his seat and guide the machine in accordance with the movements of the drawing power, and be always ready to apply the brake, because the drawing machine may be stopped suddenly from any unforeseen cause, and if quick action is not taken a collision must occur. The towing rope, for the same reason, should be from ten to fourteen feet in length. In starting also caution requires to be exercised, because the car is usually of considerable weight, and a too sudden start would part the best rope strands. To be towed under the most satisfactory conditions, it is necessary to take certain precautions with which the drivers of horse drawn vehicles are unacquainted.

Change Epicyclic Gears Slowly.

Owners of cars with epicyclic change speed gearing should be particularly careful to change their gears moderately. As a matter of fact, the driver of little experience who is used to sliding gear changing is, for a short time, hopelessly at sea on a car with the type of gear mentioned, for, whereas with the sliding gear a quick motion is necessary for gear changing, the other type requires a gradual feeling action for the change. Thus, on cars employing epicyclic gears, the driver should be careful to apply the brake which changes the gear as gradually as possible, otherwise the strain on the gear is very considerable and stripping a by no means distant possibility. Lubrication of the drums is quite permissible, and is usually provided for, but if not, the driver of the car should see that some thin oil is used to occasionally grease the peripheries of the various speed changing brake drums.

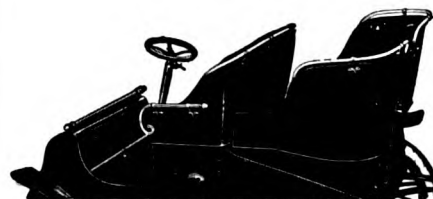
Adjusting Belt-Driven Fans.

Motorists whose cars are fitted with fan cooled radiators with belt driven fans should give a little attention now and then to the belt, and see that it has not become so loose that there is a good deal of slip, so that the fan does not rotate so rapidly and consequently does not draw as much air through the radiator as when it was tighter. To run these fans at high rates of speed requires more power than is generally imagined, and if the belt becomes over slack there is undoubtedly the slip mentioned, particularly with round belts on V-rimmed pulleys.

White Sewing Machine Company

at this season find that they are so far behind in orders for the 1904 INCOMPARABLE WHITE STEAM, TOURING CAR that it is undesirable to do more in the way of advertising than just this card.

CLEVELAND, OHIO, June 16th, 1904.



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Mr. Dealer
to order
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to furnish your Automobile equipped with

POLISHED BRASS RAILS

Or, if you have your machine now, have your DEALER ORDER RAILS DIRECT from the manufacturer.

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Sprague's Patent Canopies
With Roller Collar and Glass Front.
PRICE, \$100.



We also make a fine line of canopies, natural veneer tops, elegant in finish. Write for prices.

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PRESSED STEEL FRAMES.

We are making them from the Highest Grade of Cold Rolled Steel under the most perfect conditions of manufacture.

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NOW IS THE TIME TO CONSIDER 1905 REQUIREMENTS.

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CASE AVENUE and LAKE STREET, CLEVELAND, OHIO.

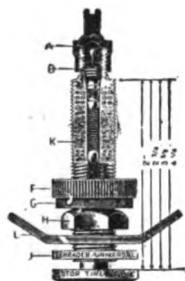
SCHRADER UNIVERSAL VALVE.

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SIMPLE AND ABSOLUTELY AIR TIGHT.

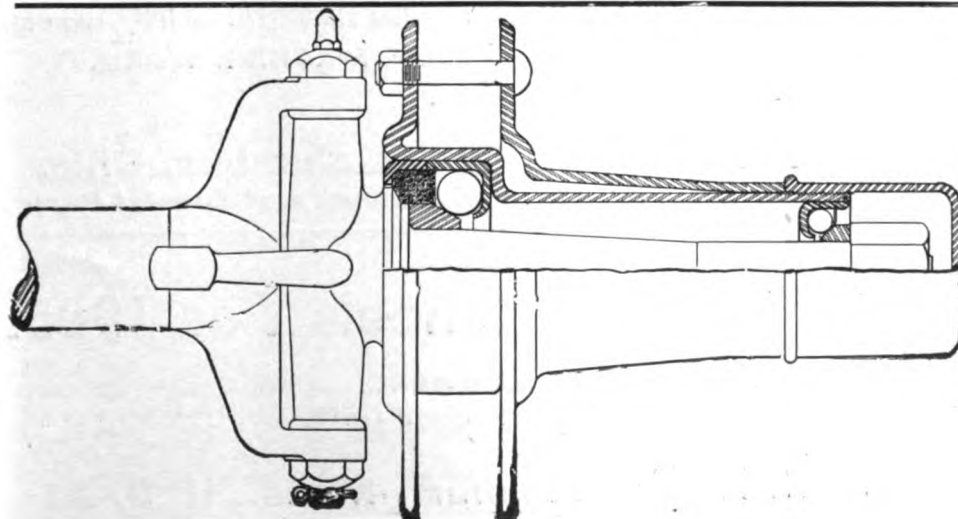
MOTOR TIRE VALVES, as shown in cut, are made in four lengths as shown. Cut is exactly half size of the 2 in. valve

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Extremely light and strong Hubs with a smooth surface for finish are obtained.

Center line of Spokes is close to Steering Head. Smooth and Easy Steering is obtained.

Races are GROUND IN POSITION. Cones and Cone Seats on Spindles are GROUND TO GAUGE.

We manufacture for the trade only.

THE AMERICAN BALL-BEARING CO.,
CLEVELAND, OHIO U. S. A.

The Week's Patents.

762,715. Electrical battery. Julius E. Haschke, Chicago, Ill., assignor to Feodor G. Haschke, Austin, Tex. Filed Feb. 8, 1904. Serial No. 192,545. (No model.)

Claim.—1. In an electric battery comprising a plurality of cells, bipolar active plates separating the cells from each other, unipolar negative pole plates constituting the exterior

side plates of the end cells, and an odd number of supplemental plates of alternating polarities in the end cell wherein both side plates are negative pole electrodes, the supplemental plates in said cell including one positive pole plate in excess of the number of negative pole plates, and the plates of like polarity in the cell being electrically connected.

762,740. Pneumatic tire. Thomas Midg-

ley, Columbus, Ohio. Filed March 23, 1904. Serial No. 199,515. (No model.)

Claim.—1. A tire body composed of concentric tubular members and longitudinal reinforces within said members. 2. A tire having a body composed of concentric tubular members, longitudinal reinforces within said members, and a covering of rubber.

762,776. Induction coil vibrator. Richard Varley, Providence, R. I., assignor to Varley



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WE ARE HELPING OTHERS ON THEIR SPECIAL MACHINE WORK.

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Quality and Workmanship of the Highest Standard Only.

PROMPT DELIVERIES GUARANTEED.

THE BIDDLE & SMART COMPANY. Amesbury, Mass., U. S. A.

Duplex Magnet Company, a corporation of New Jersey. Filed Jan. 22, 1904. Serial No. 190,197. (No model.)

Claim.—1. The combination with an induction coil, of a vibrator therefor actuated in opposite directions respectively by two electromagnets, one of which is the induction coil itself.

762,847. Storage battery. Max Schneider, Dresden Plauen, Germany, assignor of one-half to Julius Beisbarth, Nuremberg, Germany. Filed Sept. 4, 1903. Serial No. 171,954. (No model.)

Claim.—1. In a storage battery, the combination with a containing vessel, of a cover, a positive pole electrode formed of a plurality of downwardly converging grid cones put one above the other and fastened by melting to a central lead core, said lead grid cones and most part of said lead core up to a point near the upper end being vertically divided into halves, a hollow cylinder of active material adapted to form the negative pole electrode inclosing said positive pole electrode, and provided with one vertical partition wall engaging in the space between the halves of said positive pole electrode, and means for insulating said negative pole electrode from said containing vessel and from said positive pole electrode.

762,932. Portable Pneumatic Motor. Reinhold A. Norling, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Sept. 21, 1903. Serial No. 173,950. (No model.)

Claim.—1. A portable pneumatic motor comprising a plurality of sets of power cylinders, arranged at an angle to each other, pistons in said cylinders, a crank shaft with which the said pistons are connected, the cylinders of each set being parallel with each other and having their central axes in a plane which is radial with respect to the axis of the crank shaft, valves for said cylinders embracing rotative valve plugs the central axes of which are parallel with the axis of the crank shaft and each of which is common to all of the cylinders of one set of cylinders, and operative connections between the crank shaft and said valve plugs for actuating the latter.

762,933. Throttle Valve for Portable Pneumatic Motors. Reinhold A. Norling, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Nov. 19, 1903. Serial No. 181,804. (No model.)

Claim.—1. The combination with a supply pipe of a rotative throttle valve embracing an endwise facing valve seat provided with a port, a rotative valve disk which rests in contact with and is adapted to turn on said valve seat, and is also provided with a port; and a rotative tubular handle on the supply pipe which is connected with and adapted to give rotative movement to said valve disk, the ports in the valve seat and disk being arranged eccentrically to the axis of rotation of said disk.

762,934. Engine Valve. Reinhold A. Norling, Aurora, Ill., assignor to Aurora Automatic Machinery Company, Aurora, Ill., a Corporation of Illinois. Filed Dec. 7, 1903. Serial No. 184,080. (No model.)

Claim.—1. The combination with a casing provided with a valve chamber having admission and cylinder ports, of an oscillatory valve plug provided with a longitudinal exhaust passage, a radial exhaust port extending from said longitudinal passage to the surface of the plug, and a recess extend-

ing partially around the plug at the side of the same remote from the exhaust port in the plug and adapted to bring the admission port into communication with the said cylinder port, and means for actuating the plug embracing a rotative operating stud mounted in the casing in alignment with the axis of the valve plug and which is loosely connected with the valve plug by means adapted to transmit rotative movement of the stud to the plug while permitting lateral movement of the plug relatively to the stud.

762,882. Secondary Battery. James P. Clare, Quincy, Mass. Filed Oct. 31, 1902. Serial No. 129,517. (No model.)

Claim.—A secondary or storage battery comprising a vessel or cell, an electrode contained in it, active material associated with the electrode, and an exciter contained in the vessel in exciting relation with the active material, consisting of grains of the husk or coating of coconut having a porous structure saturated and combined with sulphuric acid or other liquid exciter and indestructible thereby.

762,993. Circuit Interrupter for Jump Spark Coils. Charles H. Fischer, Cincinnati, Ohio. Filed April 11, 1904. (Serial No. 202,629. (No model.)

Claim.—1. In a circuit interrupter for jump spark coils, the combination, with an electromagnet and vibrator spring, of an adjusting screw for said spring, an externally threaded part, a nut taking about said screw and screwing on said externally threaded part, and a radially movable clamping part interposed between said screw and nut, said radially movable clamping part and nut collectively having engaging faces between the same acting to move said interposed part radially toward said screw for clamping said screw in adjusted position.

763,145. Vehicle Wheel. John A. Brennan, West Orange, N. J. Filed March 11, 1904. Serial No. 197,681. (No model.)

Claim.—1. The improved wheel herein described, comprising the dish disks, bent laterally outward and then inward at their peripheries, the edge of the inward extensions being riveted to the outward extensions and forming a seat, and a tire arranged on said seat, substantially as set forth.

763,221. Muffler. Isaac B. Ullom, Claysville, Pa. Filed Feb. 20, 1904. Serial No. 194,503. (No model.)

Claim.—1. In a muffler, the combination with a casing provided with opposite heads, of a single inlet conduit entering the casing and extending toward said heads, and means for directing introduced substances toward the opposite heads.

763,232. Autosleigh. William C. Weiss, Milwaukee, Wis. Filed May 3, 1902. Serial No. 105,807. (No model.)

Claim.—In a device of the kind described, the combination with a sleigh having front and rear runners and a body portion mounted thereon, a cross beam having downwardly turned ends positioned between the rear runners, the said body portion being perforated above the cross beam, sleeves secured on the body alining with said perforations, rods secured to the cross beam and extending upward into said sleeves, an axle journaled in the ends of the cross beam, wheels rigidly secured to the axle, a sprocket wheel on the axle, a shaft above the body portion and supported by arms carried by the cross beam, a sprocket on said shaft, a chain connecting the sprockets and means for driving the sprocket on the shaft.

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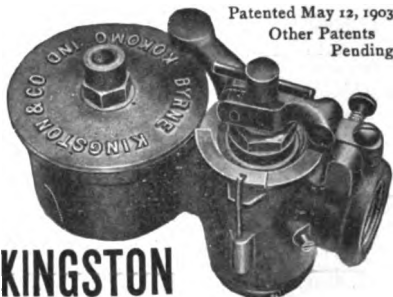
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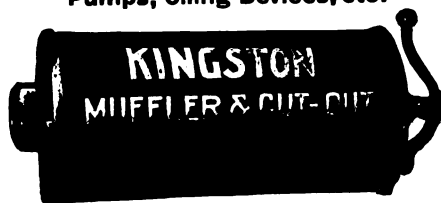
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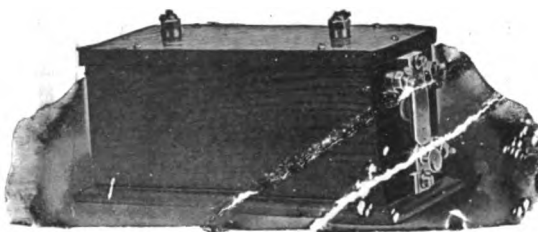


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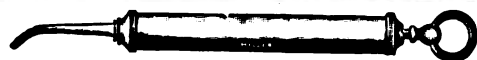
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As every motorist knows, some means of occasionally inspecting one's car from below is much to be desired. It is less necessary, of course, than was formerly the case, when there were more working parts that were inaccessible from above than are found on cars of comparatively recent date, and for this reason many a private owner contrives to manage without either an inspection pit or some form of platform, albeit at odd times he would be glad of one or the other.

Digging a pit, however, is not quite the simple matter that it seems to be at first sight. A few hours of hard labor with a spade are by no means enough for the object in view. The hole when dug must be brick-lined, and it should also be drained; in fact, when one begins to read instructions as to how to make a proper pit, one finds them to be appallingly elaborate. It is an open question, therefore, as to whether some form of platform is not a better arrangement than a pit; at all events, it is an alternative worth considering.

A device of this kind has been designed by an English motorist. The supports are made of 2-inch steam piping, which is strong enough to bear the weight of any type of car. At one end the legs are hinged, and the platform can be tilted. In the center of the frame is a windlass, and when the rope is attached to the front of the car the latter can be hauled up with ease. As soon as the car is over the centre of gravity the upper end of the platform descends.

THE

MITCHELL

**The Car You Ought to
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**Bristling With Original and
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Are you posted regarding them?

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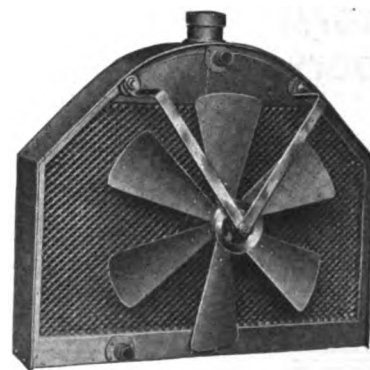
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For 1905.



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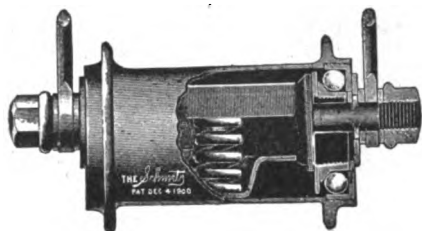
No radical changes from the already popular and successful type have been attempted, but we have confined our efforts to perfecting minor details of construction, to a careful study of the features which promote high efficiency and great durability in operation, to the improvement of processes of manufacture, and to the increasing of our facilities.

We are now receiving orders for early fall delivery.

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For BICYCLES, MOTOR CYCLES, AUTOMOBILES
Holds several World's Records for speed. Relieves and
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Most excellent and most satisfactory
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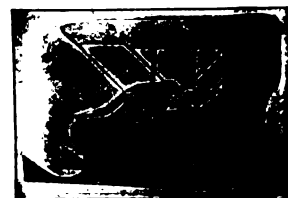
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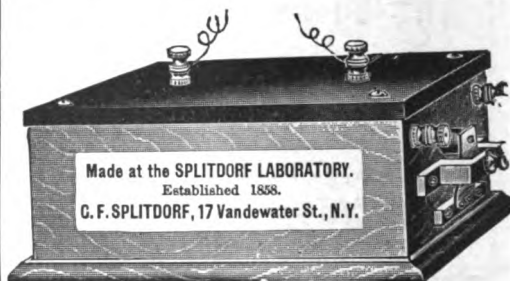
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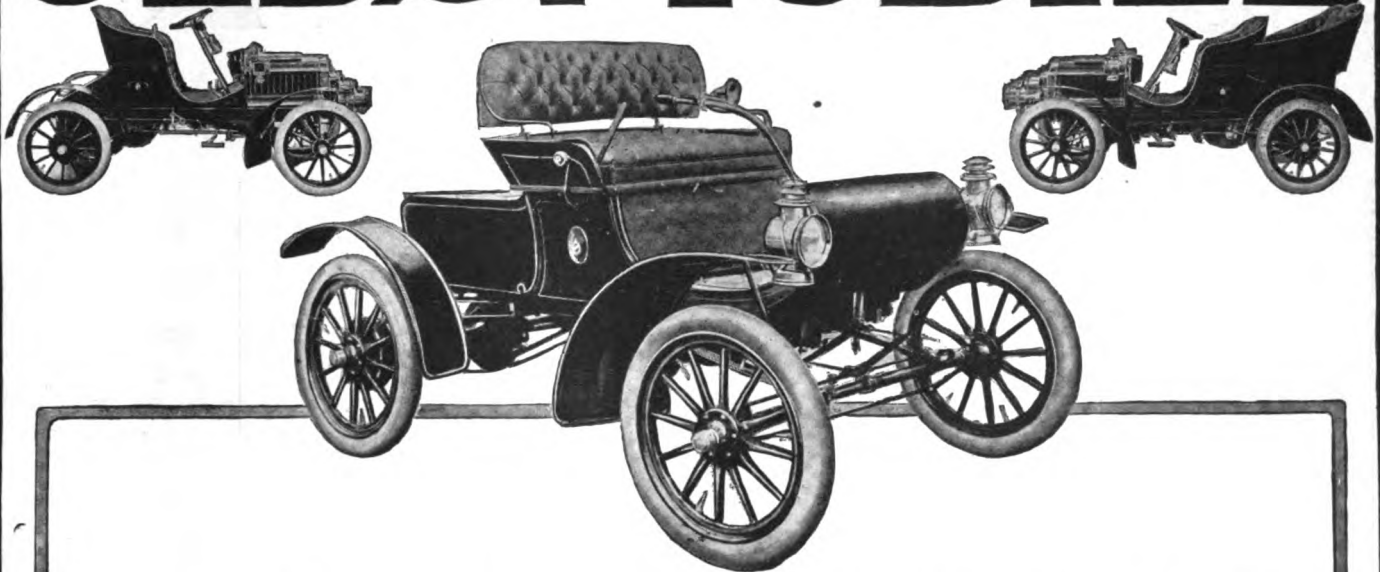
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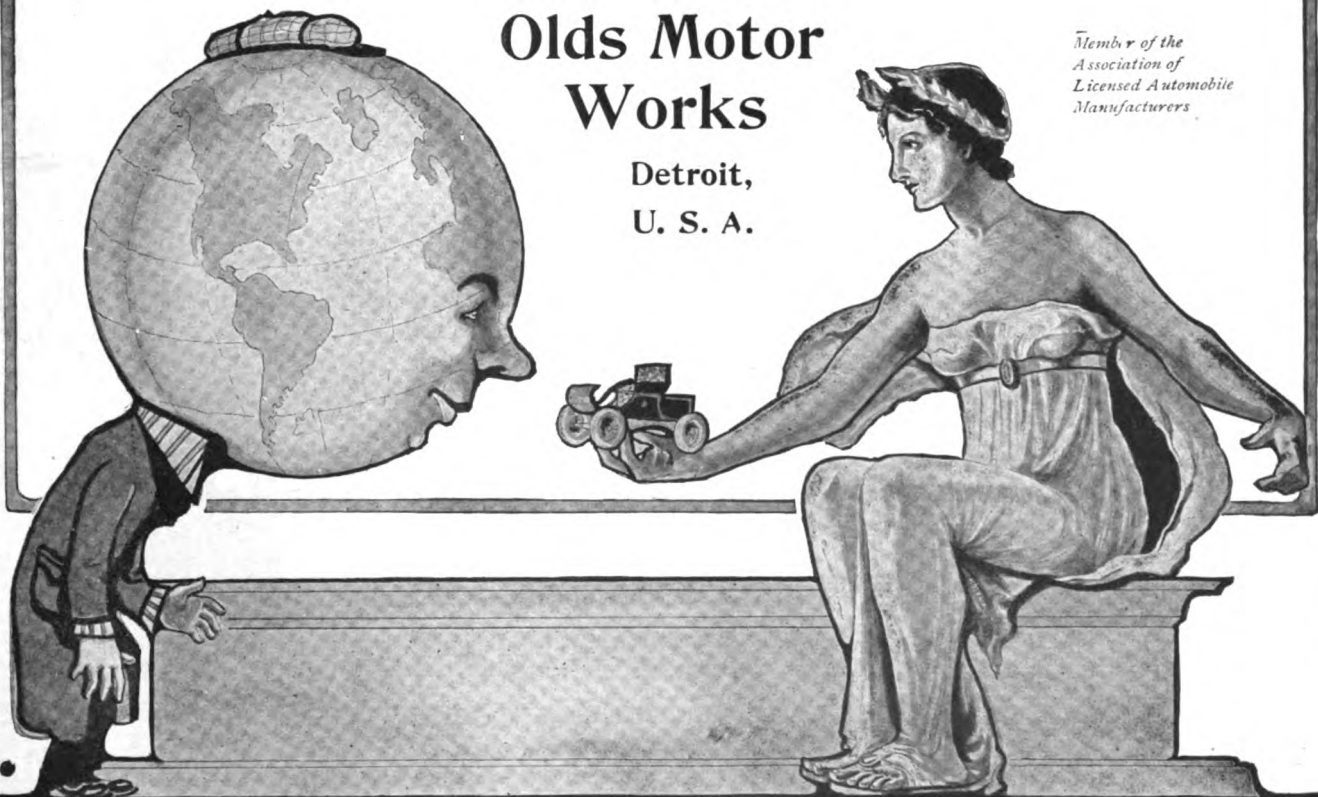
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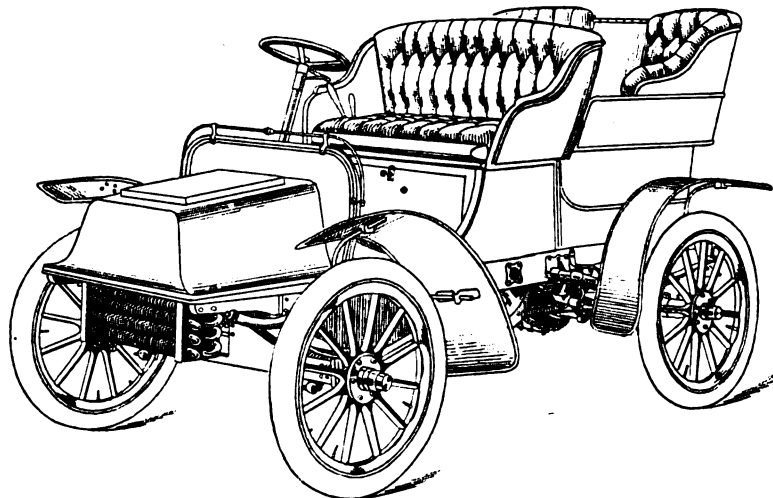
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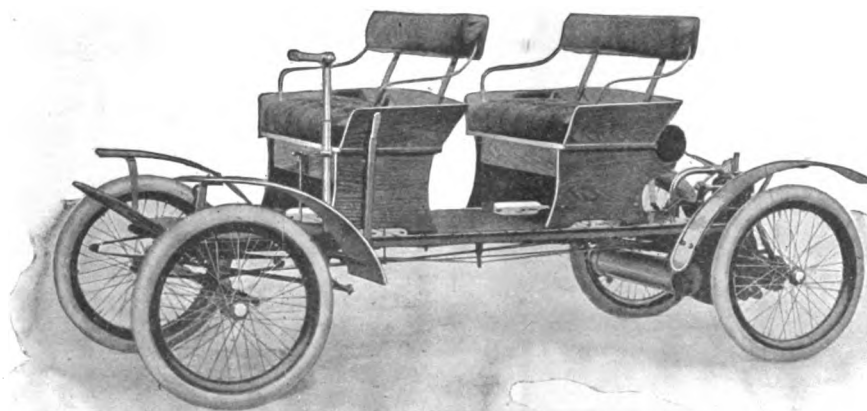


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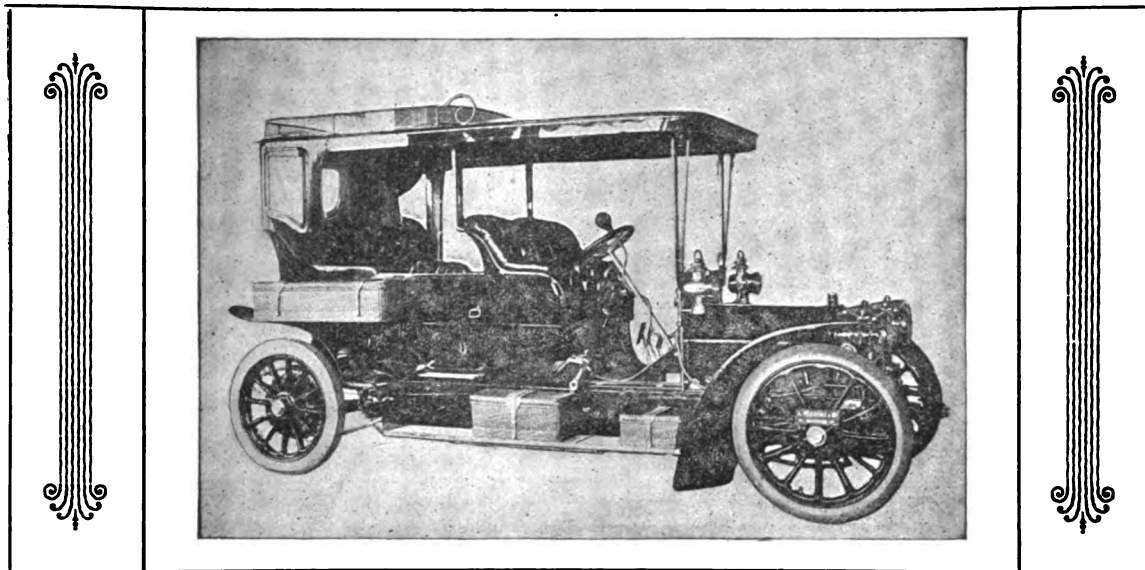
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You are fortunate if such remarks are not daily occurrences.

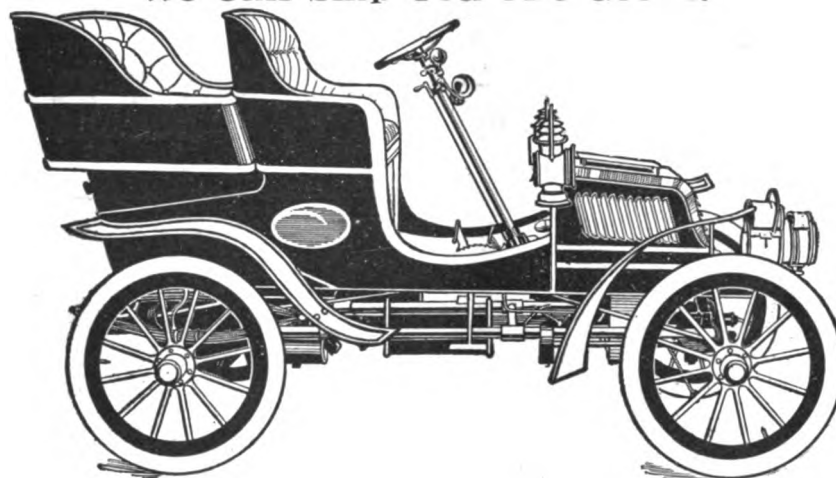
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\$800

FOR TWO

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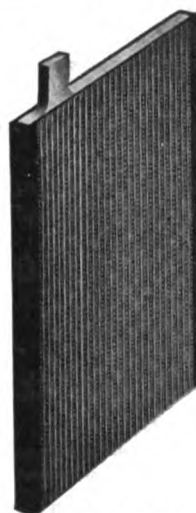
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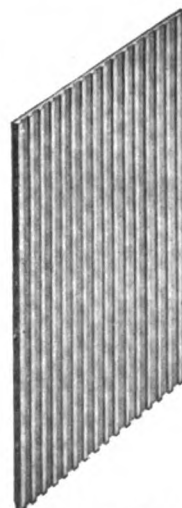
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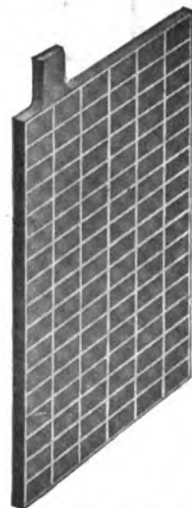
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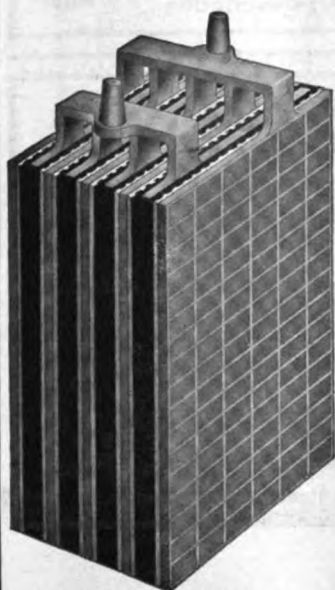
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With Roller Canifold or Glass Front.
PRICE, \$100.



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Aluminum Bodies

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TOPS, FENDERS and HOODS. Painting, Repairing and Remodeling.

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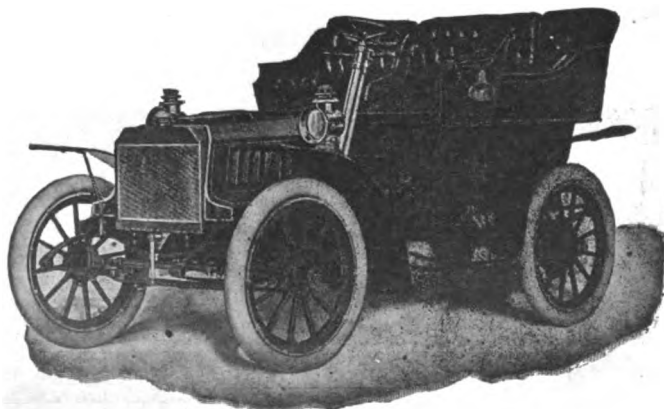
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Ball bearing transmission gear.
Wheel or lever steerer.
Divided front seat.

Automatic oiling of engine and other parts.
Gear drive.
Every part instantly accessible.

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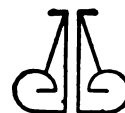
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Specify the
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Rims branded in the channel with this copy-
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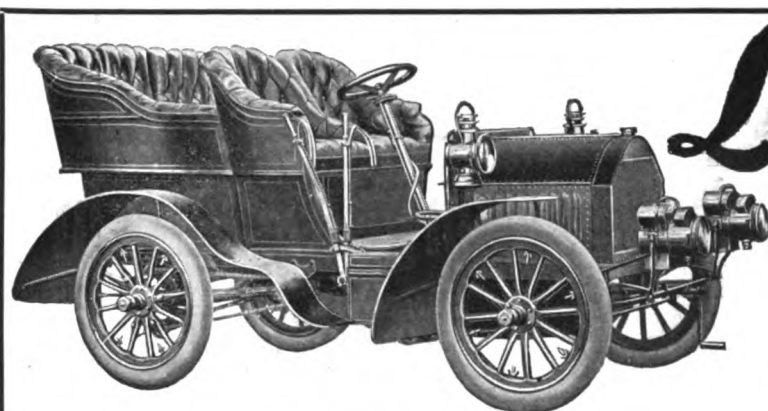
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Type C. \$2100 complete.

Locomobile GASOLENE Touring Cars.

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PRICES, \$2100 upwards.

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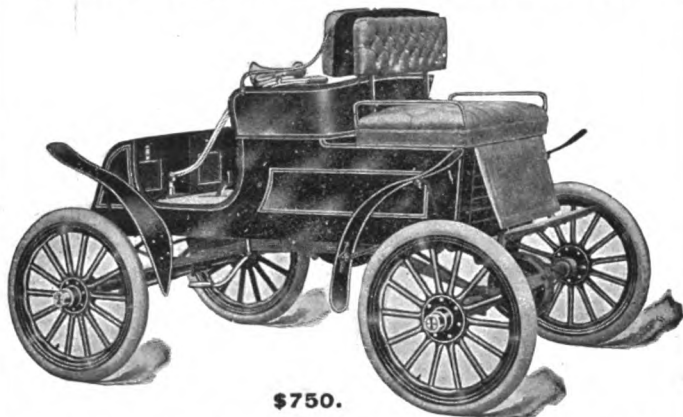
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PHILADELPHIA, 249 North Broad St. BOSTON, 15 Berkeley St.
Member Association of Licensed Automobile Manufacturers.

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OVER 1000 MILES OF ROADS OF ALL SORTS IN ALL KINDS OF WEATHER AND A REPAIR BILL OF 25 CENTS.

Did any car of any size ever equal this record? This car made a mapping and routing tour from New York to St. Louis during weather conditions that delayed traffic, and its business was to investigate every road, find the bad places. A severer road test could not be made.

The lesson to be learned from this trip is that a small car costing \$850 that can accomplish these things is worth further investigation. Let us send you our book, "One Long Jump and Two Short Steps," and our new catalogue.

THE ELMORE MFG. COMPANY,

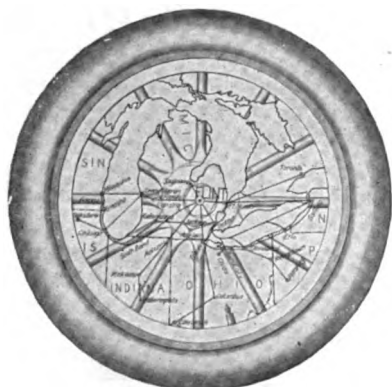
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Cleveland 10 hours.
CHICAGO 24 hours.



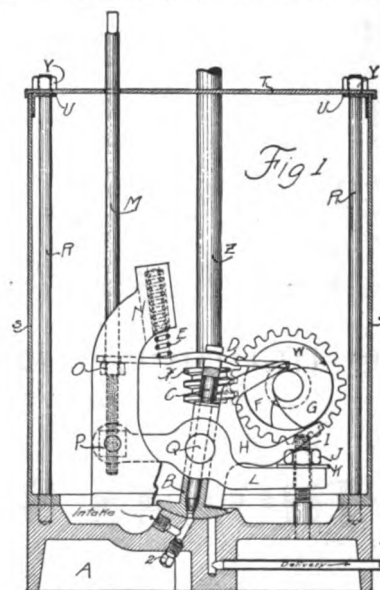
Baltimore 8 days.
New York 4 days.
BOSTON 5 days.

*We are supplying the largest
Manufacturers—WHY?*

THEY GET THE WHEELS.

IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.

THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.

Extract from the MOTOR AGE of June 11th, 1904:

"Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class."

This was a stock

Rambler

the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue "W" fully describes all models, and our booklet "A Little History" gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, July 14, 1904.

No. 16

CONRAD ASSETS SHRINK.

**Stock Appraised at \$50,000 Sells for \$1,390—
Creditors Get 5 Per Cent. Dividend.**

The trustee in bankruptcy of the Conrad Motor Carriage Company, Buffalo, has declared a first dividend of 5 per cent. It is probable that a second and final dividend will be forthcoming, but it will scarcely be of more than 5 per cent, and may be but 1 per cent.

The result will undoubtedly prove very disappointing to the creditors. In January the trustee reported personal property of \$65,000. He continued the operation of the factory and sold cars to the value of \$8,000. The remaining stock was appraised at more than \$50,000, but when offered for sale brought but \$1,390. The enormous shrinkage is due chiefly to the acceptance of Mr. Conrad's valuations. It was soon learned that not only were these too high, but that much of the material was absolutely useless. The Conrad people had made large purchases, but changed their patterns so often as to make the parts of practically no value to any one.

Officers Say Company is Solvent.

It was the turn of the officers of the embarrassed Chicago Motor Vehicle Co., of Harvey, Ill., to have their inning last week. They filed in the United States District Court their answer to the petition of Receiver E. A. Potter, who, on behalf of the creditors, asked to have the property and plant of the company sold to the highest bidder. The answer sets forth that the entire indebtedness of the company is \$211,000, while the plant and assets of the company are worth at the lowest estimate \$500,000.

White Plant in Canada Rumored.

The report is current that the White Sewing Machine Company contemplates the establishment of an automobile plant in Canada. The report cannot be verified, but it is that circumstantial that it has a White representative in Toronto looking over the ground.

Washington Company Reorganized.

A reorganization of the National Capital Automobile Co., Washington, D. C., has been effected, with the effect of forming what, to all intents and purposes, is a new corporation.

The new concern will be called the National Automobile Co., and it will take over all of the property of the old company. New capital has been enlisted, and the capital stock of \$20,000 is all paid up, which gives the company a healthy cash basis for the extension of its business. It will occupy the commodious quarters on Fourteenth street, between R and S streets, sold to the old company recently.

The officers of the new company are: President, E. C. Graham, president of the National Electric Supply Co.; vice-president and treasurer, H. B. Mirick; secretary, E. P. Nussbaum. These officers, with F. G. Stephenson and W. E. Speir, will constitute the board of directors.

Knox Boston Agents Lease New Building.

The Reed-Underhill Co., Boston, agents of the Knox car, has secured a five-year lease of the building now being erected at No. 222 to 228 Columbus avenue, and will use it as a garage and salesroom. The basement will be sufficiently large to permit of a repair shop and storage facilities, and will be particularly free from posts. The first floor will be used for the salesroom and offices, while a waiting room for women will also be located on this floor. The arrangements of the structure will be in entire keeping with the demands of the business of this firm. It is expected that the new garage will be ready for use by August 1.

Olds Adds a Building a Month.

One new building a month has been the average of the construction department of the Olds Motor Works in preparing for the present season's output. In doing so they have kept a force of carpenters and masons continually at work. Altogether fully \$100,000 has been spent in new equipment. The result is seen in the present ability of the concern to make prompt delivery of the light tonneau and standard runabout,

QUESTIONED THE SALE.

**Got Injunction Stopping Transfer of Property
and then Bought it Themselves.**

On July 8, the American Ball Bearing Company, Cleveland, purchased the entire assets of the defunct American Motor Carriage Company, of that city. The Ball Bearing Company will make use of the machinery but will dispose of the real estate and automobile parts included in the purchase.

It will be recalled that a new concern, the American Motor Company, organized for the purpose, apparently bought the bankrupt's assets some weeks ago, but the American Ball Bearing Company questioned the transaction and secured an injunction restraining the receiver from transferring the property and forced him to offer it for sale at public auction. When this was done the Ball Bearing people promptly bid it in.

To Erect White Garage in Boston.

The White Sewing Machine Co. has secured a lease of the property at the corner of Pleasant and Elliot streets, Boston, where it is to erect a five story brick building devoted entirely to its own business uses. The basement will be fitted up as a repair shop and garage, the first floor for salesrooms and office, the second floor for storage, and the two remaining floors for the sewing machine business of this company, which manufactures the White steam car. When completed this will be one of the best equipped garages in Boston.

\$200 in Prize Photograph Contest.

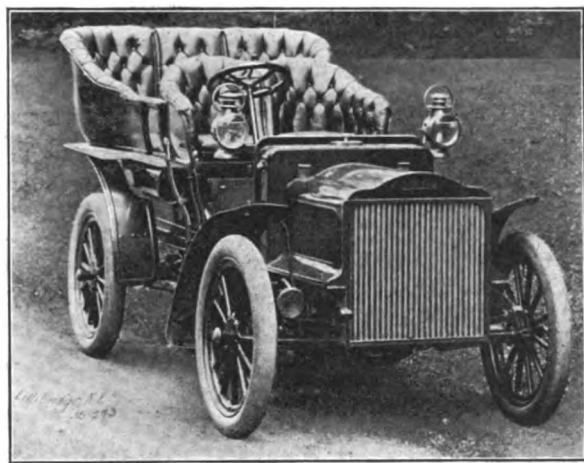
Prizes aggregating more than \$200 in value are offered by Thomas B. Jeffery & Co., Kenosha, Wis., for a photograph contest which they are promulgating. The contest is an open one, the rules governing it being few and plain. Each print submitted for competition must be 4x5 inches, and must contain a Rambler automobile. Choice will be governed by (1) artistic surroundings and pose; (2) thoroughness of detail and mechanical perfection of picture, and (3) its availability for reproduction.

NEW WHITE MODEL.

**Will be Ready September 1—Develops 15 H. P.
and Has Automatic Water Pump.**

Taking time for the forelock, the White Sewing Machine Co. will place the 1905 White steam touring car on the market on September 1. The fact that the present season's output has been completed and sold, the last assignment having been made on June 25, left the company with clear decks and in a position to prepare for a new season's trade far in advance of the usual time.

The new car, which is termed the Model E, closely resembles the 1904 car in appearance.



1905 MODEL WHITE STEAM CAR.

Many important changes have been made in it, however, and the result is a car which, for power, speed, comfort and all around serviceability, is quite beyond criticism. The power has been increased 50 per cent—from 10 to 15 horsepower—and the price from \$2,000 to \$2,500, this being, in both cases, without top. The wheel base is now 92 inches, as against only 80 inches in this year's car, while the wheels are 34 inches rear and 32 inches front, instead of both 32 inches, as at present. The weight is 2,000 pounds, an increase of 325 pounds.

The tonneau is of the King of the Belgians type, very roomy and luxuriously upholstered and appointed. The front springs are 40 inches long and the rear springs 44 inches. Wheels are of the artillery type, 34x4 inches rear and 32x3½ inches front. Tank capacity, gasoline, 15 gallons, the same as this year; water, 15 gallons. Mileage on one filling of tanks, 150. Regular equipment, oil side lights, tail light, mud guards, horn, tire repair kit and complete tool kit.

Probably the most noteworthy feature of the new car is the arrangement for the elimination of any necessity for pumping water by hand after the car is once primed. This is accomplished through providing a hill climbing gear, consisting of a pair of sliding gears inclosed in a casing on the rear axle. On a long, heavy grade it will be found desirable

to run on this low gear, which, besides increasing the torque of the axle, allows the engine to run at a higher speed, thereby furnishing the generator, through the power pump, with an increase of water supply for a continuous climb, no matter how long.

In connection with this hill climbing gear there is a neutral point between the gears at which the engine is disconnected from the car. This enables the operator to warm up his engine and to increase the steam pressure to full amount without any hand pumping, as there is always water enough in the generator to make steam for running the engine, but sometimes not enough to move the car. In thus running the engine light the best steaming conditions are obtained without even running the car out of the garage.

"SIGHT UNSEEN" ORDERS.

**Thirty Faithful White Admirers Placed Them
for 1905 Models—Satisfied Now.**

A "sight unseen" game has been played on customers of the New York White branch during the last few weeks, and, strange to relate, it proved completely successful.

Since closing out all of the 1904 models the local branch has been pursuing a novel procedure in regard to orders for the 1905 White car. Up to the time of the announcement of the new model it was impossible to explain to prospective purchasers any details. The regular deposit required on White cars is \$500, but until the progressive young men who have charge of the New York headquarters knew what they had to sell they accepted deposits for \$250, for which they gave the depositor the option of withdrawing this deposit when announcement of the new car was made or putting up the other \$250.

It is interesting to know that over thirty orders were placed on this basis.

Fogarty's Pleasure-Business Trip.

Peter Fogarty has done well with the agency for Northerns at his place, 142 West Thirty-eighth street, New York, this year. He has done so well that he proposes to take a brief respite in the shape of a trip to Ireland in August. He goes to bring home his wife, who has been visiting there, and to attend the fair at Dublin. There will be some business combined in the trip also, and he expects to return in September with the agency for some well known English car.

Wardle Says Business is Good.

C. A. Wardle, who travels about the country in the interests of the Association of Licensed Automobile Manufacturers, was asked the other day how he found business. He replied that the dealers everywhere were busy and that selling is extending into the summer in an astonishing way. He added that this applies not to any particular section, but is true generally.

Will Stock Rod and Yoke Ends.

Henceforth the rod and yoke ends manufactured by the Billings & Spencer Co., Hartford, Conn., will be carried regularly in standard sizes. They are drop forged, of the best steel for the purpose, and are furnished both in the rough and milled. Special prices will be quoted on large lots.

C. S. Howard, the Newark (N. J.) cycle dealer, has undertaken the sale of automobiles, and will make the Pope-Hartford his leader. His store, at No. 81 Orange street, will be altered to adapt it to the handling of automobiles, the doors being widened so as to admit the largest cars.

The Week's Incorporations.

Detroit, Mich.—The McHardy-Peterson Motor Works, with \$100,000 capital.

New York, N. Y.—Broadway Automobile Exchange, with \$2,000 capital. Directors—L. C. Jandorf, H. H. Jandorf and John Brown, of New York.

Washington, D. C.—National Automobile Co., with \$20,000 capital. Incorporators—H. B. Mirick, E. C. Graham, W. E. Speir, F. W. White and W. L. White.

Boston, Mass.—The Boston Automobile Dealers' Association, with \$5,000 capital. Officers—Kenneth A. Skinner, president, and J. H. McAlman, treasurer.

Trenton, N. J.—The International Automobile Air Brake Co., with \$3,000,000 capital, under New Jersey laws. Incorporators—L. B. Dailey, H. O. Coughlan and J. M. Mitchell.

Opportunity for a Live Man.

The opportunity to obtain the American agency for the famous Ducillier lamps is now open. A. A. Godin is now in this country for the purpose of placing the agency, and the fame and quality and extensiveness of the Ducillier line should make the account well worth seeking. Mr. Godin is making his headquarters at Hotel Majestic, this city.

FOUR CYLINDER WINTON.

Powerful and Handsome 1905 Model Has Many Detail Improvements—Price is \$3,000.

In presenting to public notice their 1905 model—the Winton Quad, as it is termed—the Winton Motor Carriage Co. make a radical change from all previous models; yet they retain the principal Winton constructional characteristics, modified and improved to accord with the departure referred to but bearing, both in outward and internal appearance, unmistakable resemblance to the Winton cars with which all motorists are so familiar.

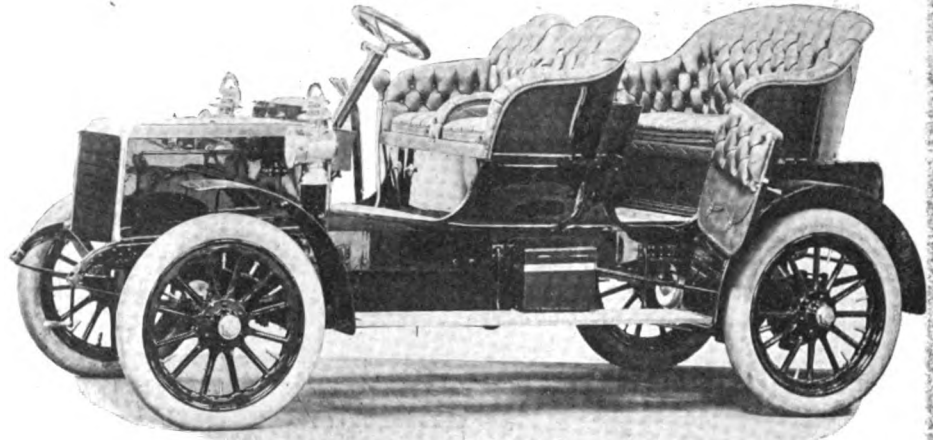
As was noted and illustrated in the Motor World a number of weeks ago, the new Winton is a four cylinder car, the engine being, of course, horizontal. The latter is positioned centrally of the frame, and the four cylinders lie parallel on the same side of the crank shaft. The cylinder axes are horizontal, and are located transversely in the frame. By bolting the cylinder lug to one of the side frame members, and the crank case arms to the other, the use of a sub frame is obviated.

The side frame members are one piece channel section pressed steel of a novel design, which also serves to form the bonnet taper in front. The depth of frame varies from 1 1/4 inches to 7 inches, depending upon the stresses at the various points. At the forward end the drop channel supports the radiator and the starting crank bearer and acts also as a frame spreader. Between the rear spring hangers a cross tube stiffens the frame. The rear end of the radiator is supported by a transverse steel tube riveted to the frame. This tube also forms a support for the steering gear case. The starting crank is not detachable, but is shifted into engagement through the spiral slotted sleeve, and is forced out of engagement by a helical spring, a pin in the crank transmitting the

motion. The horns at either end of the frame support semi-elliptical springs. The front axle is of square section, slightly dropped, and is fitted with bronzed bushed steering knuckles, containing spring capped oil cups. The front wheels are equipped with ball bearings. The plan drawing of chassis, here shown, gives a clear side of the disposition of the various parts.

The chassis plan also illustrates the accessibility of this combination. The carburetter spark plugs and the circuit breaker are readily reached by lifting the sectional floor

jackets and exhaust valve chambers integral. Each cylinder pair is bolted to the halved aluminum crank case, which encloses the cam gears, circuit breaker gears and air pump, permitting liberal lubrication of all moving parts and excluding dirt. The crank shaft connecting rods and valves are drop forged. The crank shaft and crank pin bearing are of ample length to reduce wear to a minimum. The inlet chamber castings are also cast in pairs and are bolted to the cylinder, having copper-asbestos gasket joints. The suction pipe from carburetter



1905 FOUR-CYLINDER WINTON, WITH SIDE-DOOR TONNEAU.

board, under which they are placed. The motor location permits of the inspection of all the adjunct to the perfect operation of the motor.

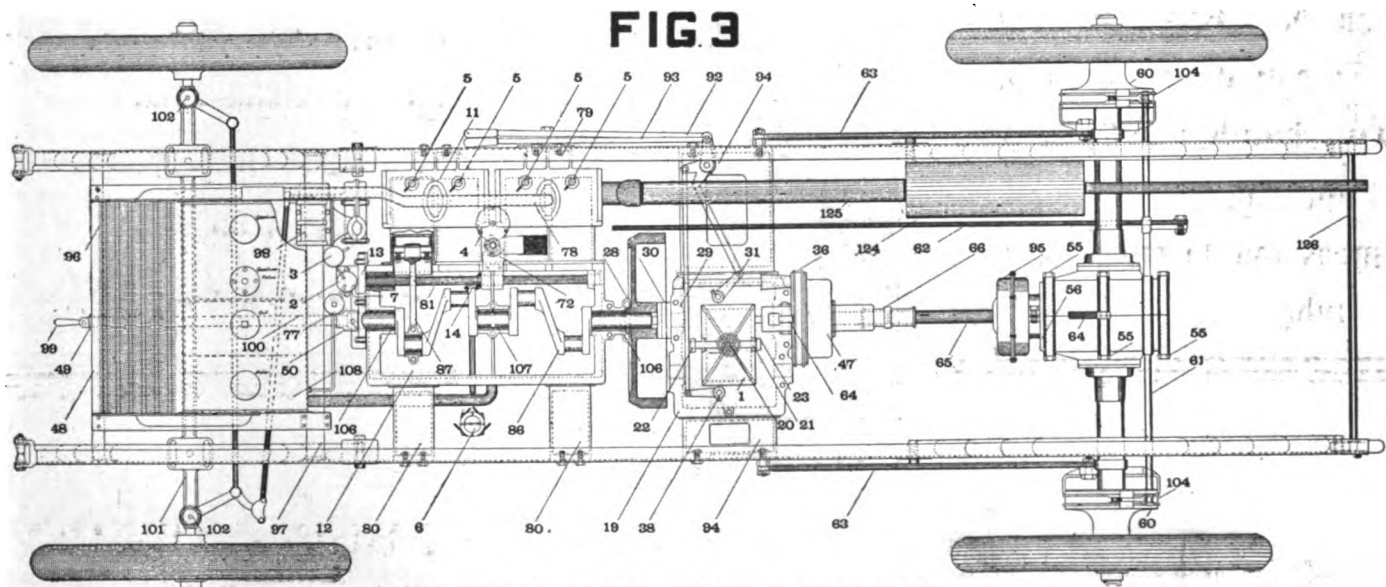
The well known Winton system of pneumatic control, which gives to these motors their flexibility and instant response with a uniform acceleration, is, of course, retained. The air pressure for governing the motor is produced by a pump located at the forward end of the engine crank case and driven by a crank attached to the cam shaft.

The four cylinders are each 4 3/8 x 5 inches, and are cast in pairs, with the heads, water

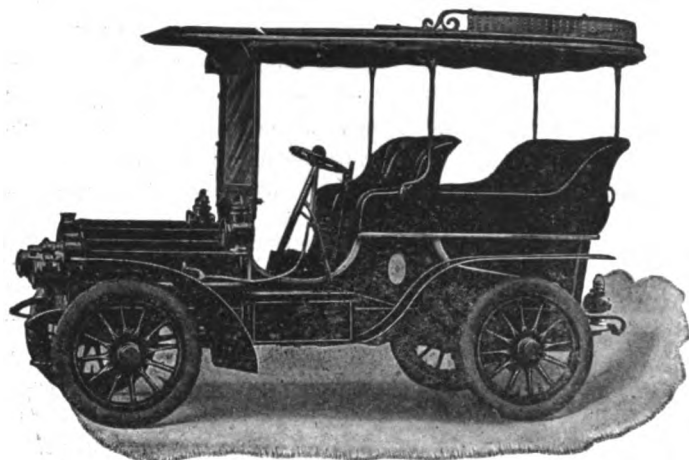
attaches to these chambers and the governing air pressure from the pump is connected and acts on the plunger for producing the speed governing function by varying the pressure on piston and so regulating the volume of the charge. Handhole covers are placed on the motor crank case and transmission gear case, thus permitting inspection by unscrewing a hand wheel and sliding the bridge. This construction gives an easily manipulated oil and dust tight cover.

The crank shaft and pistons can be removed by detaching the upper half of en-

(Continued on page 579.)



PLAN OF CHASSIS, 1905 WINTON QUAD.



The 1904 Haynes

1904
Tourneau

TWO MODELS

1904 Light
Touring Car

Tourneau, \$2,550, with top and front glass, two Solar No 1 gas headlights two Dietz Regal oil lights, tail light, horn with tube, and full equipment. \$2,450 without top and front glass.

Light Touring Car, \$1,450, having much the same outward appearance as our famous Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

We originated the use of aluminum castings in gas engine construction and, making our own composition and castings, have brought them nearest perfection. Our invention is universally imitated, but never equaled. See the catalogue.

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THE OLDEST BUILDERS OF MOTOR CARS IN AMERICA

Members of the Association of Licensed Automobile Manufacturers

Branch Store: Chicago, 1420 Michigan Ave.,
See Our Exhibit at St. Louis Fair

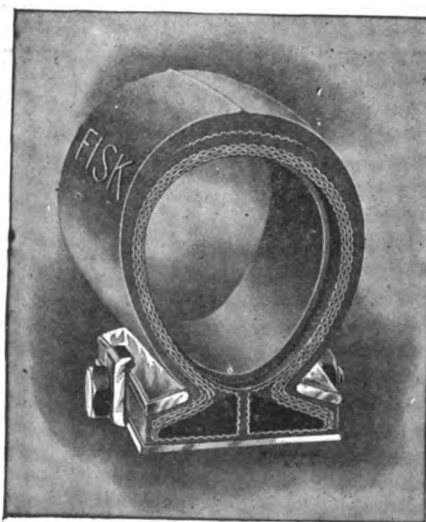
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Can be easily and quickly
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the rim.
Impossible to pinch the inner
tube.



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Have a clean record.
Give more mileage.
Give less trouble.
Have satisfied Customers.

GET POSTED ON TIRES.

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CABLE ADDRESS, "MOTORWORLD," NEW YORK

Entered as second-class matter at the New York, N. Y., Post Office, November, 1900.

NEW YORK, JULY 14, 1904.

Popularity of Touring.

Did it need proof that touring possessed an enduring hold on the popular mind, the present widespread prevalence of it would furnish that proof. Not even last year, when some observers were of the opinion that the movement had reached its height, was the touring spirit so much in evidence as at the present time. There is an outpouring of motorists all over the land, each intent upon driving his car to some favorite objective point—whether at the seashore or to inland waters, to the mountain resorts or to the seclusion of the woods; or upon visiting points of interest, such as the St. Louis Exposition.

Together these enthusiastic motorists, who start from village and hamlet as well as from town and city, form an army. They spread abroad a knowledge of the automobile, depicting in high relief the merits and demerits of the self-propelled vehicle. In

most cases they serve to dissipate the impression sought to be conveyed that motorists are reckless, law-breaking, death-dealing enemies of mankind, deserving the reprobation of all honest persons. It is found that they are a blessing rather than a scourge to the people of the sections through which they pass, and with the dissemination of this knowledge their welcome gains in heartiness and the desire to become the possessor of an automobile is born and gains strength.

As to the touring motorists themselves, it would not be easy to find a better satisfied or more enthusiastic group. To them is given the delight of a novel experience. To the joy of driving rapidly through space in a vehicle that responds to the slightest touch, is added that of the explorer. Long journeys are made, strange places visited and the stay there prolonged or shortened as may be desired. Much of the mobility of the railroad train is possessed, with a sense of independence and ability to observe at leisure and to the utmost desired degree the unfolding panorama of the hills and valleys, the streams and lakes and shaded dells of the country traversed. A more ideal method of passing a vacation could not be imagined. It goes far toward explaining the hold it has on those who have tried it, no less than its steadily increasing popularity with people who have yet to take their first tour.

A Standard Type of Vehicle.

To all intents and purposes the history of the automobile, viewed as a practical road vehicle, has been written during the past half dozen years. Within that time it has developed from a crude, elementary vehicle of more than doubtful reliability and without even a semblance of uniformity of design, into a machine that, given proper care and attention, can be depended upon to work with the regularity of a locomotive, and which has evolved into a distinct type, followed with more or less fidelity by makers all over the world.

This process of type evolution has been an interesting one. Its final triumph, which every one knows is close at hand, has been won only after a long battle, waged against big odds. It is the triumph of an idea—the determination to produce a type of vehicle which would be as distinct from the horse drawn one and as symbolical of the automobile as the present form of locomotive is of the railed self-propelled vehicle. That a standard has been reached will

scarcely be disputed. Whatever criticism was formerly levelled at it on the score of appearance has been stilled; just as the steady improvement in major and minor details of construction which has taken place has compelled the admission of present-day efficiency and satisfaction.

It is conceivable, of course, that something better than the present type of multiple cylindered, bonneted, wheel steered car will eventually make its appearance. But there is no present likelihood of it. Practically all effort is centred on the improvement of the standard type, and with results that may readily be imagined. With designers and builders pursuing different ways the sum total of their efforts was very much less than it must be with them all striving along the same lines for the same end. Indeed, no small part of the wonderful success of the French makers is due to the fact that for years they have been working to perfect a machine instead of to evolve one. No effort was wasted; it was concentrated within certain well defined limits and all of it made to count in the net result.

The Railroads' Gruesome List.

Not long ago a lawyer person of New York City got almost directly in the way of an automobile, yet was not run over. Thereupon he raised a great hue and cry and proclaimed that he was going to devote his time to sending automobilists to jail. Among other idiotic things he said that automobiles killed more persons than railroads and all other forms of vehicles combined.

This is but a specimen of some of the frantic exaggerations that frequently are directed at automobilists generally. It is well that now and then the government furnishes some figures over which there can be no quibbling.

In all the year past we have not heard so much outcry against railroads and so much talk about regulating and restricting them as we have heard in one month about automobiles. Yet, behold what the government statistics show regarding the deaths caused by railroads:

The Interstate Commerce Commission recently made its report for the fiscal year ending June 30, and it shows that the total casualties due to railroads were 86,393. Of these 9,840 represents the persons killed, while 76,553 is the number of the injured.

These amazing figures are worth studying and remembering. It may be well to quote them now and then.

Tops and Their Defects.

There are signs in the growing popularity of the cape top that it may drive out the canopy top, and yet there is considerable that is wanting in the new style of big hood borrowed from the African veldt. It surpasses the canopy in some respects for contributing comfort, but it does not wholly fill the bill and there is still room in the field for ingenious minds to devise an automobile top with more advantages and fewer drawbacks.

One of the objections to the cape top is that it is literally a drawback. Fitted to the highest part of a car and at the back, it is a monstrous hood that catches and holds the air and grievously checks headway. Its very virtue of being fitted closely at the sides and back, thereby affording excellent protection from sun, rain and dust, makes it more effectual as a wind catcher and an impediment to speed. For leisurely tourists who care not ever to travel faster than twelve or fifteen miles an hour this wind catching quality of the cape top has no particular terrors, but even in short spurts of speed, made for any purpose, such as any one is apt to make, the drawback of the hood is a serious matter; it adds greatly to the load on the engine. It is when there is a head wind and a driving rain that the inadequacy of the cape top is felt, even by the most leisurely travellers. So great is the sail-like drawing power of the big hood that in such a case if the clutch is thrown out and the engine disconnected, there is little doubt, but what a car would climb a moderate grade backward—would sail up. At such a time, too, the want of protection in front that the cape top does not furnish is severely recognized.

In spite of all this it remains true that many find the cape top preferable to a canopy, and this is not to be wondered at. The cape top is good as far as it goes, but it does not go far enough. It needs a glass front. The glass front to the canopy top is a good thing, but it cannot be manipulated with sufficient convenience. It is difficult to suggest an improvement, but it seems a pity that something in the nature of the sliding front used for some trolley cars cannot be devised for automobiles.

Just why the canopy top came into even the amount of use that it has is not altogether clear. With a railing around the edge it is convenient for carrying baggage on top. In a tropical country it would be fine as a shield at noonday, when the sun is di-

rectly overhead. In a rainstorm it is an imperfect protection with all the curtains down and the glass in front lowered. It seems a foolish thing to build all that top heavy structure simply as a support for a glass front and side curtains. It lends something of a finished look to a car, however, and is some protection, and it may yet hold its own against the increasing popularity of the cape top.

It is not the intention to decry both of these attachments as valueless, but rather to compare their defects and by so doing make plainer the fact that there is yet room for considerable improvement in this direc-

Another Jersey "Strike."

Because she "needs the money," Newark, N. J., is considering a proposition to single out automobiles for the purpose of taxation. It is estimated that there are between five hundred and six hundred automobiles in the New Jersey city, and they will yield a very comfortable sum if added to the list of taxables. As the Secretary of State has a complete list of motorists, with a description of their machines, the plan is easy of execution, the city solon's think. No thought of the unconstitutionality of such a "hold up" scheme seems to have penetrated the brains of these lawmakers. Perhaps they rely on the patience and quiescence of motorists to prevent protests. The latter are fast becoming models of forbearance. To each fresh assault on their rights and privileges they submit; a mild protest may be made, but it is the very quiescence of mildness and is never heeded. Instead, fresh aggressions are made in the confident expectation that they, too, will be submitted to. Where it will all end no man can tell.

A Minneapolis policeman shot at a motorist in order to make him stop. It appears that the latter was proceeding at a pace that the policeman considered faster than that permitted by the ordinance. He therefore stepped into the middle of the street and "commandingly raised his club as a signal to stop." His command not being obeyed, he drew his revolver and fired at the flying motorist. He missed, but the outcome might have been different. It is difficult to imagine anything of the kind happening in the case of a horse drawn vehicle.

They have swift youths out in Illinois. It is related that two Clifford, Ill., boys have built an automobile which makes a mile in eighteen minutes!

Wridgway Begins 1,000 Mile Run.

Undismayed by the fact that he was obliged to abandon his former effort to make a run of one thousand miles without stopping the engine of his car, C. G. Wridgway, manager of Banker Bros' New York branch, started before daylight on Tuesday morning of this week on a second attempt.

Again the roads between New York and Boston were chosen as the route, and a 24 horsepower 1904 Peerless car was used. Two trips over the road were planned on a schedule of fifteen miles an hour, as follows:

	First trip.	Second trip.
Leave New York.....	3:23 a. m.	9:38 a. m.
Arrive New Haven.....	8:23 a. m.	2:38 p. m.
Arrive Hartford.....	11:23 a. m.	5:53 p. m.
Arrive Springfield.....	12:53 p. m.	7:23 p. m.
Arrive Worcester.....	4:18 p. m.	10:53 p. m.
Arrive Boston.....	6:23 p. m.	11:23 a. m.
Arrive Worcester.....	8:33 p. m.	4:13 a. m.
Arrive Springfield.....	11:58 p. m.	7:53 a. m.
Arrive Hartford.....	11:28 a. m.	9:23 a. m.
Arrive New Haven.....	4:29 a. m.	12:38 p. m.
Arrive New York.....	9:23 a. m.	5:53 p. m.

*Tuesday. †Wednesday. ‡Thursday.

Promptly at 3:23 o'clock on Tuesday morning Mr. Wridgway started, and there were four beside himself in the car, George Banker, R. H. Johnston, J. J. Donovan, of Boston, acting as observer, and T. Fenty, a mechanic. Mr. Banker went only as far as Bridgeport, where Edward Bradley was taken on for a guide to Worcester, where he was replaced by W. Snow, who was the guide to Boston.

All day Tuesday cheering telegrams to the effect that all was well and the car far ahead of time were received at Banker Bros' place, No. 141 West Thirty-eighth street. The car ran through, in fact gaining all the way, and reached Boston about two hours ahead of schedule. It arrived at Bridgeport at 6:25 a. m.; New Haven, 7:22 a. m.; Hartford, 9:45 a. m.; Springfield, 11:25 a. m.; Worcester, 2:10 p. m., and the Peerless garage at Boston, at 4:30 p. m. The running time was 13 hours and 7 minutes. Five persons were carried all the way.

D. D. Holmes, of the New York store, went on to Boston by train on Tuesday in order to accompany Mr. Wridgway on the return trip, the indomitable manager being determined to drive the whole way himself.

At New Haven, on the way out, there was a narrow escape from running into a wagon, which was on the wrong side of the road. Wridgway took to the ditch, missed the wagon by inches and emerged without stopping the engine. At Marlboro, just out of Boston, there was a delay of fourteen minutes to mend a puncture and partake of a luncheon of cookies and milk provided by a farmer's wife. Near Wallingford, Conn., the car raced a way train for several miles, the passengers becoming much excited over the contest, which ended by the train stopping at a station.

The return trip from Boston on Tuesday was begun at 4:55 p. m., with John I. Eustis, of Brooklyn, as official observer, and Wridgway, Holmes and a guide as passengers. The car reached Worcester at 7:10 p. m.; Springfield, 11:07 p. m.; Hartford, 1 a. m.; Bridgeport, 5:30 a. m., and New York at 8:28 a. m. Wednesday.

The start for the second round trip was made at 10:20 a. m., on Wednesday, L. R. Smith being the observer.

All Climbing Records Shattered at Mount Washington.



Much more than the looked-for amount of record smashing was accomplished in the White Mountains hill climbing contests early this week. What may well be termed a carnival of record-breaking took place, and all anticipations of the results were cast in the shade by the wholesale slashing of times, which began when the first car was started on its wild dash up Mt. Washington, and did not cease until the last contestant had finished. Not even the famous European hill climbing contests exceeded for excitement, picturesque elements and meritorious performances the events held in the New Hampshire mountains.

Monday's work was remarkable, but Tuesday's proved to be of a phenomenal character and completely eclipsed the former's. Chief honors went to Harry Harkness, the New York millionaire record-breaker, who in a 60 horsepower Mercedes, swept triumphantly up the eight miles of narrow tortuous, boulder-strewn road in the wonderful time of 24:37.3-5, approximately twenty miles an hour. Harkness was pressed hard by the little Stanley steam car. On the first day the Stanley swept the

boards, putting up the record figures of 31:42.2-5. On Tuesday, after Harkness had made his great ride, the Stanley beat its own record and came close to the Harkness figures, its time being 28:19.2-5. A. E. Morrison, in a Peerless car, not only made the best time of the American gasoline cars, but eclipsed all the foreign ones except that of the high powered Mercedes of Harkness.

From every point of view the contests were an unqualified success. So promptly were they run off that what was intended to be a three days' programme was practically disposed of in two. This was fortunate, for the third day, Wednesday, proved to be unpropitious, rain and fog necessitating the calling off of the winding-up special speed trials that had been set for that day. As all the regular events had been brought to a conclusion Tuesday, however, this wrought no real harm. The entire affair left a pleasant taste in the mouths of the spectators and all others interested, the long list of entries being sent off in their various classes with clock-like regularity, and the successive cuts in the time taken to negotiate the ascent being made with almost monotonous regularity. On the first day, indeed,

the flyers were sent off in such order that each lopped minutes off of its predecessor's time, the day coming to an end with the Stanley performance occupying the place of honor.

The ascent of Mt. Washington was spectacular in the extreme. Almost beyond description was this storming of the frowning heights, the dash from bright sunlight into heavy clouds, which commenced in the early dawn of morning, and ceased not until the shadows had commenced to gather and the clouds to lower in the valleys below the summit of the far-famed mountain.

The scene was grand indeed; something perfectly bewildering in its magnificence and impressiveness. At one time the valley was hidden beneath a wealth of clouds, and then they would lift and display to view, eight miles below, the automobiles and the men at the Glen House, preparing for their turn to make the ascent up the tortuous passes of the mountain roads, which wind in and out, some portions bad, others good, and some decidedly dangerous for fast work, and yet these men went up without fear, and attempted to get all possible speed out of their cars, and, if possible, to place their

names among those who captured record honors on this famous grade.

This work was by no means the easiest possible. It required good machines, good men, men who feared naught, and who were capable of getting the very best out of their machines, and to them belongs all credit for their daring.

The fastest time made by the gasoline cars was accomplished by James L. Breese's 40 horsepower Mercedes. Half a mile from the start Breese tried to go into his low gear, but found that it did not work at all, and so he made almost the entire distance on his high speed. At the start the sun was shining brightly, but before the Half Way House was reached Mr. Breese drove through a storm, and then, just as he rounded the stones marking the entrance to the homestretch, the clouds lifted and the sun shone forth in all its glory and welcomed the fourth record-breaker of the day, his time for the distance being 34:09 4-5.

Twenty-five minutes after Mr. Breese's start, Mr. Stanley and his Stanley car were sent off. The car got its height of speed at the very first, and throughout the climb maintained a uniform rate of speed right up to the summit, the new record being 31:41 2-5.

Next to Breese the best gasoline time was that of A. E. Morrison, in a 24 horsepower Peerless, who did 36:44 1-5. Percy Pierce's record, 44 minutes 31 4-5 seconds, shows what can be done by a machine suffering under handicap, as six of the eight miles was ridden with a broken radiator coil.

Only second to the performance of the big cars was the work of the small and medium sized ones. The Oldsmobile driven by Benj. Smith excelled in Class 1, while the Haynes-Apperson of Frank Nutt in the second class and the Peerless of A. E. Morrison and the Pierce of Percy Pierce in the \$3,000 to \$6,000 class also excelled on the first day, Monday, the summaries for which follow:

Class 1—Runabouts of no higher list price than \$650.			
Operator and car.	H.P.	h. m. s.	
E. S. Cameron (Cameron).....	6	2:07:08	4%
W. B. Jameson (Waltham).....	6	2:08:38	4%
B. W. Smith (Oldsmobile).....	7	1:06:46	4%
B. W. Smith (Oldsmobile).....	7	1:26:14	4%
Class 4—Regular stock vehicles listed at from \$1,800 to \$3,000.			
L. J. Phelps (Phelps).....	20	0:56:15	4%
Harry Fosdick (Winton).....	20	0:54:00	4%
Regular stock cars listed from \$1,000 to \$1,800.			
H. W. Alden (Columbia).....	16	1:51:21	4%
Frank Nutt (Haynes-Apperson).....	12	1:32:25	4%
Regular stock cars listed from \$3,000 to \$6,000.			
H. Ernest Rogers (Pierce).....	24	0:48:07	4%
Percy Pierce (Pierce).....	24	0:44:31	4%
A. E. Morrison (Peerless).....	24	0:36:44	4%
Alex. Winton (Winton).....	24	1:33:02	4%
Class 6—Regular stock cars listed at \$6,000.			
James L. Breese (Mercedes).....	40	0:34:41	4%
Class 2—Stock vehicles listed from \$650 to \$1,000.			
F. E. Stanley (Stanley steam).....	6	0:31:41	4%
A. C. Prescott (Prescott steam).....	7 1/2	1:08:34	4%
George Prescott (Prescott steam).....	7 1/2	1:10:20	4%

*Gasoline.

Monday's sensational performances only whetted appetites for still greater ones. These expectations were not disappointed, for Harry Harkness, with that combination of skill, recklessness and good luck which has marked his racing career, appeared on the scene, and with almost incredible daring achieved a ride which made a fitting finale for the climbing contests. He rushed

up the mountain slopes at a speed unapproached and unapproachable, and carved the figures 24:37 3-5 on the record table, to stay there until next season at least. Spurred on by his example, F. E. Stanley, James L. Breese, A. E. Morrison and Otto Nestman all outdid their previous day's performances, but none could get within several minutes of Harkness's time.

Harkness's ride was a ride of a lifetime, a ride in which the operator virtually took his life in his hands in sending the machine up over eight miles of narrow road winding in and out the mountain steepness, and at times being fearfully near the edge and brink of disaster, if not instant death.

Harkness arrived at the Glen House early in the morning, having driven his car over the road from New York the previous day and spend all night in making necessary repairs and especially to his springs, which were all but fractured. Then, at 3:21 o'clock, he was given the word and he shot from the front of the house at lightning-like speed. He fairly flew down the narrow road which opens to the mountains and covered the first two miles in six minutes. He was then like a scared deer flying from the hunter and there was no hesitation on his part. He struck the grade at the height of his second speed and found that he could not make the turns around the rock-bound roads with his clutch in, so that at the turns and twists he threw out his clutch and coasted around, letting his engine run. He often skidded dangerously near the edge, and according to his mechanic and those who watched his work, knocked huge stones down into the valleys of the mountains.

The great deal of interest was centered in this ride, as it was recognized that if nerve and cool-headedness on the part of the driver could accomplish anything Harkness would place the mark at a point where it would not be reached for some time to come. And he certainly did.

The Half Way House, four miles away from the start, was reached in 11 1/2 minutes, being 1 1/2 minutes better than the time made by Stanley on his record ride earlier in the day. Here Harkness's clutch commenced to slip and cause him some little trouble. Notwithstanding he kept right on, and so fast did he take the hummocks and water ruts that he was more frequently out of the seat than in, and, as he himself said, he felt on one or two occasions that he would go down to the bottom.

In order to keep as far away from the outward edge as possible, on two occasions at least, he sent his wheels into the ditch on the further side, and by this method he reached the six-mile mark in 20 minutes, 30 seconds after the start.

Then he struck out for the final goal, two miles away. Time and time again he went around the turns on two wheels, and finally dashed to the finishing tape 24 minutes 37 3-5 seconds after leaving the bottom, eight miles away.

It was a daring and hair-raising ride, one such as Harkness, like all other record performers of to-day, vows and declares he will never again attempt. As Harkness came to the finish some two hundred persons who had gone to the summit to watch the work gave him a mighty cheer.

The contest for the best American car performance was exceedingly keen. A. E. Morrison had two minutes deducted from his running time for being interfered with, but it is regrettable that unintentional interference on the part of one of the operators should place a stumbling block in his way, for while it may not have had any bearing upon his inability to surpass the time made by Stanley, it unquestionably caused him a greater loss than the two minutes returned to him by the referee.

Otto Nestman's feat was also a creditable one. In the same Stevens-Duryea which, in the tour of exploration some weeks ago, established the record at 48 minutes 30 seconds, he reduced its previous figure by some nine minutes.

At the conclusion of Harkness's record ride Morrison started up the mountain with his Peerless machine, but it plainly showed the effects of the hard banging of the morning, when it lost its bonnet and unswung its radiator. This fact, together with the weather conditions, it raining torrents at the summit and threatening to do the same lower down, caused him to give up the trial.

It was a wise decision, as the Consolidated Motor truck, which started later, soon found. The latter car, like Morrison's, had gotten beyond the two-mile mark when, on the advice of the officials at the top, coupled with those of the natives, its trip to the summit was abandoned as a heavy storm, which started in sleet, was raging.

As a whole, Tuesday's work was very much better than Monday's. Practically all the cars competing improved their time decidedly, notable instances being the light Columbia of H. W. Alden and the Phelps car of E. J. Phelps. Webb Jay, in a White steamer, likewise made a fast run. In the free for all race the same was true, although Breese was much disappointed at not surpassing the time of the Stanley car.

The two classes for motorcycles were amalgamated and the contestants called to the starting line. Only three responded, and at 11 o'clock they were sent away on their journey to the top of the mountain.

Soon after the start Arthur Bachelder forged ahead of his mate, F. R. Dickinson, and led him by two minutes half way up the mountain. From that point Bachelder continued to gain and finished the run in the exceedingly good time of 34:11 3-5. Dickinson finished in 52:42 2-5.

The summary for the second day follows:

Vehicles weighing from 1,000 to 2,000 pounds.			
		Elapsed time.	
Driver and car.	H.P.	h. m. s.	
A. E. Morrison, Peerless.....	24	0:28:06	4%
Webb Jay, White.....	steam	0:42:10	4%
L. J. Phelps, Phelps.....	20	0:47:20	4%
H. W. Alden, Columbia.....	12	0:51:50	4%

Open to all vehicles, any weight and any motive power.

Harry Harkness, Mercedes.....	60	0:24:37%
F. E. Stanley, Stanley (steam).....	6	0:28:19%
James L. Breese, Mercedes.....	40	0:31:22%
Otto Nestman, Stevens-Duryea.....	7	0:40:35
Vehicles not exceeding 1,000 pounds in weight.		
Benjamin Smith, Oldsmobile.....	7	1:20:46
Turner, Oldsmobile.....	7	2:25:51%
R. H. Peabody, Oldsmobile.....	7	2:16:55
Motorcycles not exceeding two horsepower.		
Arthur Batchelder, Metz.....	2	0:34:11%
F. R. Dickenson, Metz.....	2	0:52:42%

On Wednesday morning dense clouds overhung the mountain, and at times developed into heavy falls of rain. It was therefore deemed best to call off the projected speed trials, which were of a free lance nature, fast time being out of the question, and there being much danger of accident.

Toward noon, however, the sun broke through the clouds and burned away the mists and a conference of visitors was held. It was too perfect a day to let go by without a demonstration of some sort, so on the spur of the moment an automobile parade was organized, and at half-past two o'clock in the afternoon twenty-one machines filed slowly from Bretton Woods loaded with seventy-seven passengers. Governor W. J. Bachelder, having arrived in the mean time, was given the place of honor at the head of the procession, in Harry Harkness's 60 horsepower Mercedes, which holds the record for the climb to the clouds. After doing the mile to Fabyan's and back the procession turned to the East and climbed the 400-foot grade to the Crawford House, at the gates of Crawford Notch. On their return to Bretton Woods a salute of thirteen guns was fired.

An endurance run, previously scheduled for Saturday, will take place to-day from Bretton Woods, through Lancaster, Littleton, Franconia, Profile House and Bethlehem.

Fifty Entries for Ardennes Race.

The Ardennes race is this year taking on the character of a kind of consolation stakes for those who were not successful in the eliminating trials for the choice of the Gordon Bennett cars. The fact that Panhards are competing brings into the field all the champions, and Mors, Hotchkiss, De Dietrich, Darrack, etc., will strive for the mastery over a course without neutralizations. Speed and reliability will weigh equally in the trial, and a second classification for cars which do 1,000 kilometres (620 miles) without a stop is being organized. There are already over fifty entered.

The organizing of the race is in the hands of the Baron Pierre de Crawhez, who will this year devote himself to this alone. Each maker will be allowed to enter only three cars, and there will be two days' racing—one day for the big cars and the other for the light cars and motorcycles. The course measures 120 kilometres, which will be covered five times in order to make a total of 600 kilometres, or 375 miles.

Morris Poznanski, Dr. F. D. Cook, Leslie Wilson and Alexis Gaynor, Chippewa, Wis., motorists, started last week on a one-thousand-mile automobile trip through Minnesota and the Dakotas.

FOUR CYLINDER WINTON.

(Continued from page 573)

gine crank case. The exhaust valve springs are reached through a cover plate. The inlet and exhaust valves are arranged in line, and the exhaust valve is water jacketed and has a bearing at the exhaust valve chamber and also at the crank chamber. At the crank case end is a cylindrical plug, slotted to receive exhaust cam rollers, the whole being prevented from rotating by a pin working in a slot in the exhaust valve spring chamber.

The motors exhaust into a receiving or expansion chamber lying directly beneath the cylinders, from which the exhaust passes to the second expansion chamber through the pipe. From here it passes noiselessly to the air.

The transmission has been somewhat modified as to detail only, making it considerably more compact. All clutches consist of one cone and one flat-faced member, acting upon a bronze member.

A gear driven centrifugal pump is attached to the motor crank case on its under side. From the pump, a cast aluminum T connection distributes water upward to each cylinder pair. The top water connection supports the foot button and directs the water to the lower row of the main radiator tubes. Passing successively through nine rows of tubes, the water leaves the top of the radiator to enter the watertank, from which it flows to the auxiliary radiator underneath the tanks and main radiator. By gravity it flows to the pump. A drain cock is attached to the bottom of pump, which is at the lowest part of the circulating system.

The Winton radiator-tank unit is retained. The main radiator consists of 54 ½-inch copper tubes, each 22 inches long, with 17-16 inch square radiating fins. The auxiliary radiator consists of 16 ¾-inch copper tubes 22 inches long. This construction of a second radiator is especially effective and extremely novel. Oil, water and gasoline are contained in one large partitioned tank. The warm water in this way keeps the oil fluid in cold weather. There is a heat insulating space between gasoline tank and oil tank, which prevents gasoline from becoming heated.

The car is equipped with twelve-spoke, artillery, wood wheels, fitted with 32 inch by 4 inch tires in front, and 34 inch by 4½ inch tires in the rear.

Two sets of brakes are fitted. The emergency brake is operated by the forward movement of high speed lever, while the hub brakes are operated by a rocker shaft, to which the foot brake pedal is attached.

The body is a new and distinct type of side entrance tonneau, with an entrance on either side. Bonnet and dash are in one piece, made of sheet aluminum, finished with brass cornice pieces. A cast aluminum body frame supports the seats, which are of laminated wood. The divided front seat accommodates two persons. A pocket in the front of the tonneau is sufficiently capacious to ac-

commodate light coats, gloves and other touring paraphernalia. The spacious locker underneath the tonneau seat, which is reached from the rear of the car, is utilized for tools and luggage. The tonneau seat accommodates three people comfortably. The upholstering throughout is deep and luxurious.

The mud guards are of laminated wood, extending slightly over 90 degrees on the front wheel and 180 degrees on the rear. A long laminated wood side step extends from one guard to the other, making the entry for both front and tonneau seats.

The wheel base is 8 feet 8 inches, gauge, 56½ inches, standard; length over all, 12 feet 6 inches; springs, front, 38x2 inches, 5 leaves; rear, 44x2 inches, 6 leaves. The price is \$3,000.

Sixteen Year-Old Girl is Driver.

A sixteen-year-old girl is at the wheel of a 11 horsepower touring car which is now being driven from Grand Rapids, Mich., to St. Louis, Mo. Miss Inez Dryden is the fair chauffeuse, and she is accompanied by her father and mother, Mr. and Mrs. E. E. Dryden. Their car is an Imperial surrey, fitted with a canopy top and glass front. It carries a dress suit case strapped on behind, an extra tire and hampers on either side. In one hamper are the oils used on the machine and some canned goods. In the other is a chafing dish outfit, cups, cooking utensils and more canned goods. Mr. Dryden is an old yachtsman, and he has prepared to serve hot luncheons in case of breakdowns in the country or delays at meal time. The party may have little picnics along the way, if choice spots are found. The surrey is equipped with storm curtains, so that in case of a storm the occupants will be safe from the rain.

From Chicago the party planned to follow the route of the American Automobile Association's big run to St. Louis. They will go through Joliet, Bloomington, Springfield, Alton, Lincoln and other cities. They expect to go "comfortably," and will not try to break distance or speed records. They will stop when they wish and where they wish, and may spend some time on the run between Chicago and St. Louis.

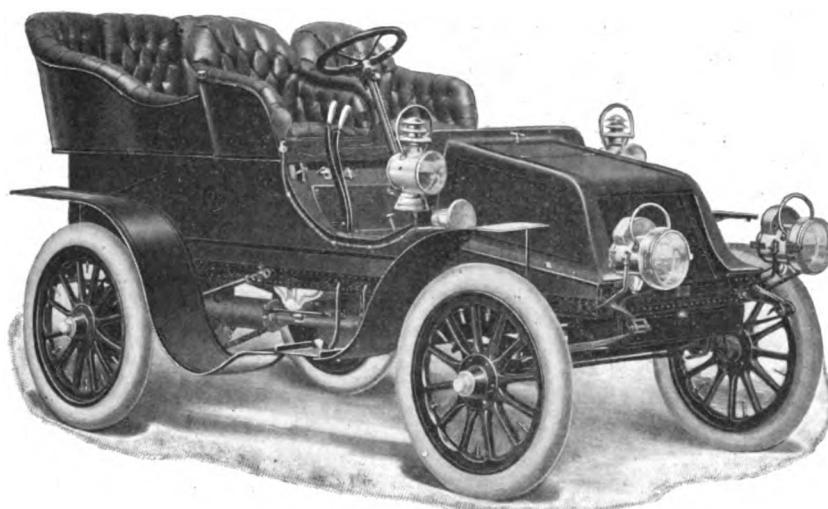
Early Closing for A. C. A. Clubhouse.

Notice has been sent to the members of the Automobile Club of America that during July and August, the club house at 753 Fifth avenue, New York, will be closed at 7 o'clock in the evening. At the last meeting of the governors of the club the following new active members were elected: T. O'Connor Sloane, Nelson Robinson, Albert E. Goodhart, Walter Ferguson, jr., and E. J. Conill.

Notice of the death of Alexander Fischer, who was a member of the club, has been taken by the posting on the bulletin board of a black-edged card having on it "Died, Alexander Fischer, July 6.

J. M. Hartshorn and J. M. Hodson, two New York brokers, passed through Toledo, O., last week en route for St. Louis.

WINTON



Under Ordinary Circumstances

perhaps a lightly constructed car will serve you all right. But what about emergencies? Will it stand the severe tests that may possibly be encountered? The WINTON will. It does so every day, because its Factor of Safety is great. Our precaution in manufacturing a car strong in construction, with powerful motors, means your safety all the time. And safety cannot be disregarded.

Complete with Canopy Top, Lamps, Horn, Tools, etc.
\$2,500; without top, \$2,300; f. o. b., Cleveland.



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Branch Houses in New York, Boston, Philadelphia and Chicago.

WINTON AGENCIES EVERYWHERE.

PROMPT DELIVERIES.

ALEXANDER FISCHER DEAD.

Well-Known New York Importer Found in His Apartment with Life Extinct.

Every one in the trade and connected with the industry who knew the man was shocked and saddened to learn of the sudden death of Alexander Fischer, of 239 West Fiftieth street, New York, on last Wednesday. He had the record of being the largest individual importer of automobiles into this country last year, yet his competitors, in common with all others, respected and liked him for his brightness, business ability and engaging personality. Although only thirty years in age, he was a conspicuous figure among the dealers in foreign motor cars. Last year forty high class, expensive cars were brought over by him and sold, out of which alone his profits were said to have been \$40,000.

He was also a designer of cars. He had been interested in several companies, and his chief delight was in handling his business almost alone. "Anything to keep my mind occupied," he often said.

The story of his death is peculiarly a sad one. He was found dead on a lounge in his room at the home of Dr. D. D. Stevens, 49 West Eighty-third street, New York, on last Thursday. He had killed himself with a revolver that lay on the floor beside him. He had been dead since the previous evening, July 6. Dr. Stevens, at whose home Mr. Fisher had lived for years, found the body while on a trip to the city from his summer residence.

Though young, and prosperous in business, without an entanglement of any kind in the world, yet he suffered from neuralgia of the heart, which for twelve years had made of his life a living death. Deprived of every joy and pleasure, the progress of the disease at last broke his spirit.

Dr. Stevens said that it was small wonder the man's spirit had broken.

"I knew the young man's parents in Cincinnati," said Dr. Stevens. "Twelve years ago he was brought to my office by his parents. He was then on the point of entering the School of Mines at Columbia, from which he was later graduated as a civil engineer. Even a partial examination showed me he had angina pectoris (neuralgia of the heart), for which there is no cure. He listened without flinching to the sentence and to the programme mapped out to prolong his life.

"He immediately came to live at my house and became practically one of the family. His life was ordered on lines absolutely devoid of excitement. A little phial of nitroglycerine tablets became his sole and constant companion. Instead of outdoor sports he was condemned to solitary walks and an almost hermitlike existence among his books in his room.

"He went into the automobile business because the development of the industry at-

tracted his mechanical instincts, but even in the midst of business he could never forget. At any moment—in the street, at his office, in the house—morning, noon or night, there was likely to come that sudden sharp dart of pain, as if his breast had been seared by a red hot iron, then following agonizing, twisting and gripping, which would end in unconsciousness. How often he suffered no one can say; he seldom spoke of it. Only the little phials of tablets multiplied constantly. They became part of his life.

"The symptoms had been more frequent of late, and for some weeks Mr. Fischer did not venture forth on any journey without an attendant or a close friend. Within the last thirty days I know of several instances where he fell in the street. He knew and I knew that all this meant the very near approach of death. What actually caused him to lose his courage I do not know. It must have been a recurrence of his attack yesterday."

The funeral was from Dr. Stevens's house on last Saturday. Mr. Fischer was unmarried and he had no partner in his business.

Webb Jay Makes a Daylight Record.

Just over three hundred miles from sunup to sundown—with a little margin to spare on the latter end—is the very creditable record placed to the credit of the White car recently. That wideawake young man, Webb Jay, was the record breaker, and he used the identical White touring car which came through the 1903 endurance contest with such flying colors. The run was from Rochester, N. Y., to Cleveland, Ohio, a distance, by cyclometer measurement, of 303 miles. The detailed itinerary follows:

Left Powers Hotel, Rochester, 4:25; arrived in Buffalo 8:25, Eastern time; left Buffalo 8:43, Central time; arrived at Erie 1:30; left Erie at 2:03; arrived at the city limits of Cleveland 6:45; arrived at Hollenden Hotel, Cleveland, 7:15.

Uncle Sam Found the Addressee.

The world is a big place, but missives have a way of reaching their destinations, nevertheless. A case in point was the delivery of a postal card addressed to "Detroit and Lansing, Esq., Michigan, U. S. A." Uncle Sam was astute enough to turn it over to the Olds Motor Works, they having factories in both the places mentioned. The card was from Gravenhage, Holland, and its message was as follows:

"We pray you to us informed, if you also manufactured motor dray carts—and us to send your illustrated catalogue."

Dropped Match Causes Slight Fire.

The Palace Automobile Station, Hartford, Conn., had a narrow escape from serious damage last week. A fire, caused, it is thought, by a match carelessly dropped on the floor of the garage, ignited some gasoline and slightly burned a Cadillac car standing near. It was extinguished before it could extend, however.

PROTEST BRIDLE PATH PLAN.

Cyclists and Property Owners Alone Appear at Hearing on Lafayette Boulevard Grab.

A hearing before the Washington Heights Board of Improvement was held on Tuesday of this week, in City Hall, New York, on the question of widening Boulevard Lafayette.

The official plan submitted by City Engineer Webster calls for a widening of the present thirty-foot driveway to forty feet, the building of a bridle path forty feet wide on a terrace above, and the building of a street forty feet wide for local traffic on a second terrace above the bridle path.

This plan aroused the antagonism of automobilists, drivers, cyclists and all classes of road users because of the manifest injustice of giving a forty foot road to equestrians, of whom there are few, and confining all other classes of vehicles to a forty-foot driveway. When the time came to make formal protest, however, both the automobilists and the drivers were derelict. President Scarritt, of the Automobile Club, had been notified, but was unable to be present. During the hearing, a messenger from W. W. Niles, counsel for the club, arrived, saying that he was coming to oppose the plan and asking that the board wait for him. The board adjourned before Mr. Niles arrived, if he ever did arrive. Dr. H. D. Gill, of the Road Drivers' Association, who had intended to be present, also failed to arrive.

Former Alderman Joseph Oatman, president of the Associated Cycling Clubs, spoke in opposition to the official plan, and submitted two plans in variation from it which he favored. Both of these increased the width of the driveway to fifty-five feet, and provided for only twenty feet of bridle path and thirty-five feet for the street. One plan brought the bridle path to the same grade with the driveway, while the other kept it on a terrace.

President R. G. Betts of the Federation of American Motorcyclists, opposed the official plan and spoke in favor of a wider driveway with the bridle path on the same plane and separated by grass plots and trees, a broad boulevard in fact similar in plan to that on which the Drexel Boulevard in Chicago was laid out.

James Butterly, a lawyer, representing some of the property owners along Boulevard Lafayette, urged the immediate adoption of the official plan, while Peter A. Hendrick, a lawyer, representing other property owners who were opposed to the plan was represented by a messenger who asked that the hearing be adjourned in order that Mr. Hendrick might be heard in protest.

The board decided to adjourn and settle the question in executive session.

ANNUAL DILL PILGRIMAGE

Noted Lawyer and Party Started for Rangeley Lakes on Sunday in White Cars.

On Sunday afternoon at 3 o'clock the second annual Dill pilgrimage to the Rangeley Lakes, Me., began. Last year Mr. James B. Dill, the noted corporation lawyer, carried through successfully the first of these tours, driving over roads and visiting places never before visited by an automobile and even by few wheeled vehicles of any kind. On that occasion the party and the impedimenta took three cars to carry them. This time the party is not quite as large, one instead of two of Mr. Dill's daughters taking the trip, and consequently only two cars are taken along. The Dill summer residence is at Rangeley Lakes, and each season for a num-

ber, also started with the party in one of his cars, and will go a considerable part of the journey with them.

As there are few hotels on the Canada part of the trip, the party will rough it in the open. Tents were taken along, and fresh provisions will be provided by hunting on the way. Mr. Dill will make his map of the route for the use of others who may wish to follow him. In addition to his White touring car, Mr. Dill took another of his machines for his servant, luggage and supplies.

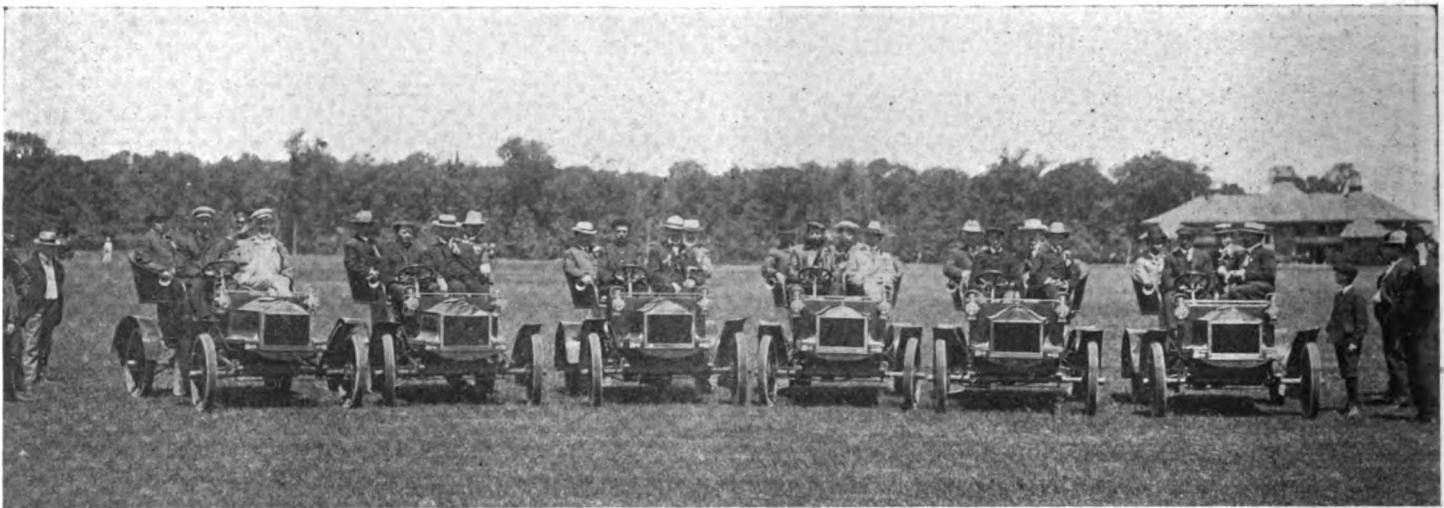
The itinerary includes Nyack, Tarrytown, Poughkeepsie, Hudson, Albany, Saratoga, Lake George, Lake Champlain, across to Vermont, crossing the Canadian border at Rouse's Point, thence to Montreal and along the west bank of the St. Lawrence to Quebec, and thence through the woods to Maine. It is expected that the United States border will be reached at the Sandy Bay Plantation. From here two ranges of mountains

BRACKETED WITH PEDLERS.

Chicago Ordinance Makes it a Misdemeanor to Drip Oil on Asphalt Pavements.

There is more trouble in store for Chicago motorists. They were ranked with oil peddlers in an ordinance presented to the City Council last week, calling for drip pans under automobiles and oil carts to catch waste benzine and other oils, and thus save asphalt pavements. The measure, which was drawn by Alderman Ehemann, provides a penalty of \$50 alike for wealthy clubmen who leave fluid trails in the wake of their touring cars and for the humble vender who spills gasoline from the spigot of his oil tank.

The measure went to the judiciary committee, but not until several of the aldermen



GROUP OF OLDSMOBILE LIGHT TONNEAU CARS CARRYING PHILIPPINE COMMISSIONERS AROUND BELLE ISLE PARK, DETROIT.

ber of years the family has wended its way there to pass the heated term in its refreshing coolness. Usually railway trains were used to convey the family from Orange, N. J., but several times Mr. Dill went on horseback. Last year, having become an ardent motorist, he conceived the project of driving there in automobiles, and he made the trip without difficulty.

This year the destination is the usual one, viz., the Dill camp at the Rangeley Lakes, Me., but Mr. Dill will try to find a route through that unsettled part of Canada from Quebec through the forests to the Maine border, and thence along the Benedict Arnold route, taken by the latter when he led his men in an attack on Quebec. There is no road through the Canadian section where he will travel. He will carry equipment for a regular frontier life.

He will be accompanied throughout his journey by his daughter, Miss Emma Dill, and by John M. Schmidt, who made the journey with him last summer through the White Mountains. Winthrop E. Scarritt, president of the Automobile Club of Amer-

ica, will be crossed to Morse River plantation, and from there the road will run to Rangeley. The return trip, in September, will be made by a route that is more used. Mr. Dill, to provide against "doctored" gasoline, has shipped quantities of the fluid ahead to various railroad centres.

San Franciscans Want Speedway.

If the contemplated plans of some of San Francisco's automobile owners and enthusiasts are carried out, it will not be long before construction work will be begun on a twenty-seven mile automobile speedway connecting that city with Redwood City. The scheme to form a corporation, purchase a right of way 200 feet wide and build a modern road, well lighted with electricity, has been quietly talked of for some time, and has now taken definite shape.

Dr. Harry Tevis, of San Francisco and San Mateo, has offered to give \$25,000 toward the project. Thomas Magee, jr., James L. Flood, L. P. Lowe, James D. Phelan, Max Rosenfeld and Frank E. Harrington have all promised their support in a financial way.

had whetted sarcastic tongues upon the automobile drivers and owners.

"The next thing is to make them bottle up the smell," commented Alderman Foreman as the ordinance went over.

As ground for the ordinance it was asserted that damage to the extent of thousands of dollars annually is done the asphalt pavements by the leakage of kerosene and other oils on the surface. Delivery wagons are charged with being one source of the deterioration, but the greatest cause, it is alleged, are the thousands of automobiles that race about with engines spitting solvent fluids upon the pavement. It is provided that a large receptacle be required under each automobile to catch the drip.

Two John Creates a Sensation.

Uncle Sam has a habit of dealing liberally with such of the Indians as manage to survive wars, disease and other destroying agencies. That, perhaps, accounts for the ability of Two John, a full blood Sioux, to create a sensation by riding into the town of Bonesteel, S. D., with his squaw in an automobile one day recently. He paid \$2,000 for the machine in Omaha.

DIVERSITY OF DECORATIONS

Marked Springfield's Floral Parade—Handsome and Grotesque Cars Attracted Attention.

At Springfield, Mass., the floral parade of automobiles held there on July 4, will be long remembered by the natives as a great event, as indeed it was. Seventy cars were in line, all decorated in handsome or grotesque manner.

THE KNOX BOAT. MR. AND MRS. C. R. CULVER AND PARTY OF CHILDREN.

broke forth into cheering, the city fathers heartily appreciating the artistic expression as seen in the decorations of the many machines and in the fine turnout of business and professional men from every part of the city.

Everybody was interested in the decision of the committee, consisting of L. C. Hyde, W. W. McClench and R. W. Day, which had in charge the awarding of the automobile parade prizes. The awards announced immediately after the parade were as follows:

Springfield Automobile Company, won by N. B. Wade, Stevens-Duryea.

Seventh prize, silk automobile cap, donated by Haynes & Co., won by George E. Fenn, Knox runabout.

It was the long experience of Forbes & Wallace's window dresser, William Bute-ment, that secured the first prize for his concern. Few colors were used in the work, the decorations being largely in white and blue. The seats of the car bearing six young women in white gowns, who carried white umbrellas, were built up tier fashion, thus

SECOND PRIZE WINNER. JOHN COLLINS IN A KNOX.



WINNER OF THIRD PRIZE, OFFERED FOR MOST NOVEL VEHICLE—KNOX FARM WAGON.

Buried beneath roses, chrysanthemums, poppies, smilax and flags, the motor cars of various sizes, runabouts and touring cars rolled majestically through every section of the city. The parade committee, consisting of Stanford Haynes, F. S. Carr and M. T. White, had planned the route so that in a short space of time the long line of cars was viewed by scores of people who otherwise might not have seen anything of the parade feature of the day's celebration. There was little applause along the line, and the automobilists made little noise themselves with horn or bugle. It was rather a wonderstruck audience. But at the final wind-up of the parade at City Hall the crowd

First prize, for most effectively decorated automobile, Knox cup, Forbes & Wallace, a Knox tonneau.

Second prize, for most artistically decorated automobile, Stevens-Duryea cup, John Collins, a Knox tonneau.

Third prize, most novel production, \$10 order on Fisk Rubber Company for repairs, Knox body department, a Knox tonneau.

Fourth prize, umbrella automobile basket, donated by F. S. Carr & Co., won by S. L. Haynes, Knox tonneau.

Fifth prize, automobile clock, donated by Adolph A. Geisel, won by T. W. Gilbert, Winton.

Sixth prize, automobile jack, donated by

taking away the familiar shape of the car. Lattice work was formed on the sides of the car with blue ribbon. Then around its edges were rows of poppies, shaded very delicately in pink. A life-sized eagle, holding red, white and blue reins in its beak and also a bunch of big firecrackers, occupied a prominent place in front of the machine. This caught every eye along the line of march. The machine was in charge of Robert Muir.

The second prize for the most effectively decorated car went to one on which the color effect was largely in green, the tall pampas grass used making a fine showing. Two other colors, yellow and white, were used

in draping the body of the car, the flower used being the pink chrysanthemum. These were used artistically to conceal the wheels.

The third prize for the most novel vehicle in the parade was won by a Knox touring car, which was fitted out with a hay rack and carried a big load of hay with a number of men grotesquely dressed as "Rubes" upon it.

The fourth prize winner, the S. L. Haynes automobile, was decorated with red and yellow roses on a ground work of pure white festoons hung all over the machine, while on four standards above the automobile, rope festoons had been placed.

One of the most pleasing features of the parade was an automobile entered by the Knox Automobile Company, and carrying a big boat in which several children were seated. The machine was not entered for a prize. It was in charge of Mr. and Mrs. C. R. Culver and E. Pennington. With them were the following children: Margaret and Charlotte Stone, daughters of Mayor Everett E. Stone, Helen Staats, Catherine Miller, Mary Robson, Caroline Wright, Margarite Hawkins, Marion Tibbs, Dorothy Tibbs, Gladys Brown, Chapin Bemis, Christine Brown, Crawford Hawkins, Fred Wright and Vivian Culver.

It will be seen that Knox cars received the first four and the last of the seven prizes awarded. It was almost a Knox parade, in fact, there being twenty-seven of that make of car in the parade, out of the total of seventy.

Thirty Cars Enter at Empire Track.

When the entries closed on Tuesday for the races to be held at the Empire City Track, New York, on Saturday, it was found that a record breaking list was in hand. The total showed thirty different cars, which is more than have been entered at any previous meet at the track. When the list is looked over, good sport seems to be assured.

The entries include Oscar Lewisohn's 18 horsepower Mercedes, Wayne Kratzer's 10 horsepower Duryea, H. E. Rogers's Peerless, A. E. Morrison's Peerless, Alfred G. Vanderbilt's Mercedes, Joseph Cowan's Panhard, Nathaniel Huggins's Decauville, H. S. Harkness's Mercedes, W. G. Brokaw's Renault, besides a string of Northerns, Ramblers and Autocars.

Automobile Day for Poughkeepsie Fair.

An innovation of interest has been decided upon by the Dutchess County Agricultural Society in connection with its sixty-third annual fair, at Poughkeepsie, September 13-16. It is the introduction of automobile races on the last day of the fair, Friday, the 16th. The one-mile track on the Poughkeepsie fair grounds, is one of the finest in the country. It is 80 feet wide and is splendidly suited to automobile racing. As no automobile races have been held at Poughkeepsie, the making of September 16 "Automobile Day" at the fair should attract a crowd. It is understood that there will be a race, or a series of races, for local owners.

2,017 MILES WITHOUT STOP.

Englishman Performs Feat in 124 1-2 Hours —Incidents of the Run.

Diversified with many incidents, humorous and otherwise, and a few accidents was the successful attempt made in Great Britain last month to establish a 2,000-mile non-stop record. The exact distance covered was 2,017 miles, which is, of course, much in excess of anything previously accomplished. The time consumed was 124½ hours—just over five days—during which time the engine was kept running constantly, although the car itself was stopped a number of times, some of them for considerable periods. The time would have been much shorter had it not been for the peculiar actions of the observer, who appears to have been possessed of strong views on the subject of his rights and privileges. It is related that he wandered off to indulge in shaves "and other luxuries unheard of in events of this importance," the car and its other occupants meanwhile being left to await his return in impatient idleness.

The car which performed the feat was a 20 horsepower Talbot, in charge of D. M. Weigel, who was accompanied by three companions—a reserve driver, a mechanic and the observer already referred to. The start was made from the Thames Embankment, London, and the car headed north for Perth via York and Edinburgh, thence back to London. This journey was repeated, and the run was brought to a conclusion by a detour to Portsmouth, the finish being made at the Embankment. There the voyagers were met by the Earl of Shrewsbury and Talbot, head of the concern which makes the Talbot car. The noble earl, having congratulated Weigel on his fine effort, presented him with a massive silver cigarette box within which reposed a Bank of England note for £100, as a personal mark of his appreciation of the efforts he had made.

The first round trip to Perth was accomplished in about fifty hours, the weather conditions and roads favoring the voyagers. The second upward journey occupied considerably longer than the first, for terrible weather was experienced in the North of England during Saturday and Sunday. At times the car passed through torrential deluges of rain, the heavy downpour making the roads so frightfully heavy and skid-some in parts that speed had to be greatly reduced. The wind, which blew cuttingly from the northeast, bringing with it cold chilling rain, was so severe that Weigel and his driver were reduced to taking hourly spells at the wheel.

A great deal of trouble was experienced with tires. At one time all four tires were replaced, at another one and at still another a new inner tube was inserted. With this exception the car went through in splendid shape. Not a single adjustment of the mechanism of the car was made throughout

except the replacement of the two tappet springs to the exhaust valves.

The passage through many Scotch towns on Saturday night and the early hours of Sunday morning was rendered most difficult, dangerous, and nerve shaking by reason of the number of drunken men encountered.

At the conclusion of the run all four men were thoroughly exhausted and the car was completely encased in mud. With faces drawn and haggard and eyes sunken from want of sleep, the former presented a sorry appearance, which, nevertheless, did not prevent them from breaking into a hearty cheer at the completion of the 2,000th mile.

Newport to Have a Beach Meet.

Reginald C. Vanderbilt, whose interest in the sport of motoring bids fair to equal that of "Willie K.," is the moving spirit in a project to hold automobile races on the beach at Newport, R. I., this summer. He has been given full authority as a committee of one of the Newport Amusement Association to arrange for a series of automobile races. Friday, July 29, has been selected for the meet, and Mr. Vanderbilt has determined upon Sachuest Beach as the place in the vicinity best fitted for racing automobiles.

The programme as arranged by Mr. Vanderbilt follows:

1. For motorcycles; open to all; one and one-half miles; a silver cup valued at \$100 to the first.
2. For electric machines owned by summer and regular residents of Newport and Narragansett Pier; one and one-half miles; a silver cup valued at \$100 to the first.
3. For gasoline cars not exceeding 10 horsepower, owned by summer and regular residents of Newport and Narragansett Pier, raced in road condition; one and one-half miles; a silver cup valued at \$100 to the first.
4. For gasoline cars exceeding 10 horsepower and not exceeding 24 horsepower, owned by summer and regular residents of Newport and Narragansett Pier; one and one-half miles; a silver cup valued at \$100 to the first.
5. For gasoline cars not exceeding 24 horsepower; open to all; a silver cup valued at \$100 to the first.
6. For gasoline cars exceeding 24 horsepower; open to all; a silver cup valued at \$150 to the first.

It is hoped that the meet will take the same position in automobile racing in the North that the meet at Ormond did in the South last winter. Mr. Vanderbilt has made careful measurements at Sachuest Beach, and he finds that at low tide a good firm track sixty feet wide and nearly two miles in length is available.

Mr. and Mrs. N. H. Kilmer, of Ocean Grove, N. J., recently made a quick run to Atlantic City and back to their home in a Rambler car. In all, 237 miles were covered in one day.

ENTRIES FOR ST. LOUIS TOUR

Sufficient in Hand to Insure Success—Finishing Touches Being Put to Details.

Actual paid up entries now in the hands of the touring committee of the American Automobile Association assure the projected big tour to St. Louis of a fair measure of success. On last Saturday the committee issued a list of bona fide entries as follows:

H. W. Whipple, Andover, Mass., Boston to St. Louis.

John Farson, Chicago, Ill., Chicago to St. Louis.

C. H. Gillette, 31 West Forty-second street, New York, New York to St. Louis.

W. T. White, Cleveland, Ohio, New York to St. Louis.

Elliott C. Lee, 40 State street, Boston, Mass., Boston to Buffalo.

A. R. Pardington, 81 Willoughby street, Brooklyn, New York to Albany.

Dr. Julian A. Chase, Pawtucket, R. I., Providence to Albany.

Dr. W. E. Milbank, Albany, N. Y., Albany to Buffalo.

Augustus Post, 31 West Forty-second street, New York, New York to St. Louis.

Frank X. Mudd, Chicago, Ill., Chicago to St. Louis.

W. C. Temple, Farmers' Bank Building, Pittsburg, Pa., Pittsburg to St. Louis.

R. P. Scott, Baltimore, Md., Baltimore or New York to St. Louis.

Charles J. Glidden, 10 Postoffice Square, Boston, Mass., Boston to St. Louis.

William Monypeny, jr., Columbus, Ohio, Columbus to St. Louis.

H. W. Smith, Syracuse, N. Y., Syracuse to St. Louis.

George S. Waite, Cleveland, Ohio, Cleveland to St. Louis.

James L. Breese, 753 Fifth avenue, New York, New York to St. Louis.

H. Frederick Lesh, 597 Atlantic avenue, Boston, Mass., Boston to St. Louis.

Thomas B. Jeffery, Kenosha, Wis., Boston to St. Louis.

A. J. Wills, 210 Park street, Akron, Ohio, New York to St. Louis.

Haynes-Apperson Company, Kokomo, Ind., New York to St. Louis.

Hart D. Newman, 212 Carondelet street, New Orleans, Baltimore to St. Louis.

Samuel Stone, jr., 818 Common street, New Orleans, La., Baltimore to St. Louis.

Royal R. Shelden, 761 Boylston street, Boston, Mass., Boston to St. Louis.

Dr. W. E. Rolfe, 761 Boylston street, Boston, Mass., Boston to St. Louis.

Paul H. Deming, 42-44 West Sixty-second street, New York, New York to St. Louis.

George H. Lowe, 509 Tremont street, Boston, Mass., Boston to St. Louis.

Ray D. Lillibridge, 170 Broadway, New York, New York to St. Louis.

Cecil P. Wilson, Hotel Vendome, Boston, Mass., Boston to New York.

A. P. Pendleton, 809 North Grant avenue, St. Louis, New York or Boston to St. Louis.

W. E. Metzger, care Cadillac Automobile Company, Detroit, New York to St. Louis.

F. N. Manross, Forestville, Conn., Bristol, Conn., to St. Louis.

E. H. Wallace, Freeport, Pa., Pittsburg to St. Louis.

Charles R. Greuter, Holyoke, Mass., Springfield to St. Louis.

F. A. La Roche, New York, New York to St. Louis.

C. Douglas Neare, Cincinnati, Cincinnati to St. Louis.

John R. List, Wheeling, Va., Wheeling to St. Louis.

F. C. Donald, Chicago, Chicago to St. Louis.

G. O. Draper, Hopedale, Mass.; Worcester to St. Louis.

In addition to these the touring committee has received letters notifying it that further entries will be made which will bring the total to 120. It is estimated by the committee that at least 250 more entries will be received before the opening of the tour.

The organization of the tour is now being completed by the touring committee. The various sections will be in charge of the various chairmen of local committees. Thus Mr. Glidden will captain the New England division; Mr. Smith will be in charge of across New York State; Mr. Waite from Buffalo to South Bend; Mr. Mudd for the balance of the main line. On the National Highway, Messrs. Scott, Monypeny, Varney and others will be in charge. At St. Louis the local committee and the Automobile Club will take charge.

In addition to these section managers,

FLORIDA CLUBHOUSE OPEN

Function took Place on July 4—Record-Trying Week in November Decided on.

Word has been received by mail that the new clubhouse of the Florida East Coast Automobile Association, on the Ormond-Daytona beach, was formally opened on July 4.

President C. G. Burgoyne of the association has taken a deep interest in its affairs, and, although nominally a resident of New York, he now lives for the most part of the year at Daytona, where he has a handsome residence and stable of fast automobiles, which he speeds on the beach. Mr. Burgoyne is a New York printer who went to Florida for his health, and he declares that the sum-



NEW CLUBHOUSE ON THE ORMOND-DAYTONA BEACH. THE "39" REFERS TO VANDERBILT'S WORLD'S RECORD MILE.

Augustus Post and C. H. Gillette will travel with the main line division and will exercise general control over the tour on the road. A. B. Tucker has been designated as representative of the touring committee in advance. He will travel by railroad, arriving at each night's stop in advance of the tour, and will have authority at all points to complete hotel and garage arrangements.

Each car in the tour will carry two official numbers, 12 by 18 inches in size. No pennants or other decorations will be furnished, but no restrictions have been placed on the tourists if they desire to decorate their cars at St. Louis or any other point.

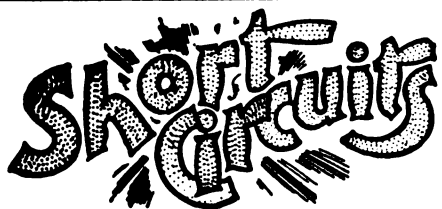
Entrants will receive their road cards, with running directions, together with suitable cases for their protection, on or about July 30. Entry numbers will be sent on this date or earlier. Each entrant will also receive detailed instructions regarding all stops, luncheon places, and all arrangements for the tour shortly before they start.

Advices received from St. Louis committeemen indicate that the parade through the city and Exposition grounds will be a notable event. It will be headed by President Francis of the Exposition, the city officials, and a local escort of automobilists.

mer at Daytona is cooler than that of New York, so he proposes to pass much of his time in the handsome clubhouse on the beach, of which he was the prime promoter.

W. J. Morgan, the association's New York representative, has already arranged for a record trying week, the second week in November, when the mile in 39 seconds, made by W. K. Vanderbilt, jr., last winter on the beach, will be attacked by American and foreign cars. Mr. Morgan sent a telegram of congratulation to Mr. Burgoyne on July 4 and received the following reply:

"The Florida East Coast Association gives you greeting, and begs to acknowledge to the fullest extent that your efforts in our behalf have made the Ormond-Daytona beach known wherever a newspaper is printed. The clubhouse doors, with Mr. Vanderbilt's world's record for the mile nailed to the lintel in 18-inch figures, were opened at 5 o'clock to-day with one hundred and fifty members present, each wearing the club badge with '39' stamped in the shield. Regret that you are not with us."



Comfortably bestowed in fifteen automobiles, fifty motorists of Hartford, Conn., and vicinity last Saturday afternoon ran to Middletown and return. It was the first run of the reorganized Automobile Club of Hartford, and was a most enjoyable occasion, the roads being fine and the weather ideal.

R. C. Dean, of Newark, N. J., took the officials of the New York and New Jersey Telephone Company on an inspection tour through New York, New Jersey and Long Island last week in an automobile. The automobile was used to carry them from station to station, and the trip consumed two days.

More than a score of enthusiastic Dallas, Tex., motorists met recently and organized the Dallas Automobile Club. The following officers were elected: Colonel John G. Hunter, president; E. J. Kiest, vice-president; G. R. Scruggs, secretary; J. D. Schofield, treasurer, and Henry Garrett, managing director.

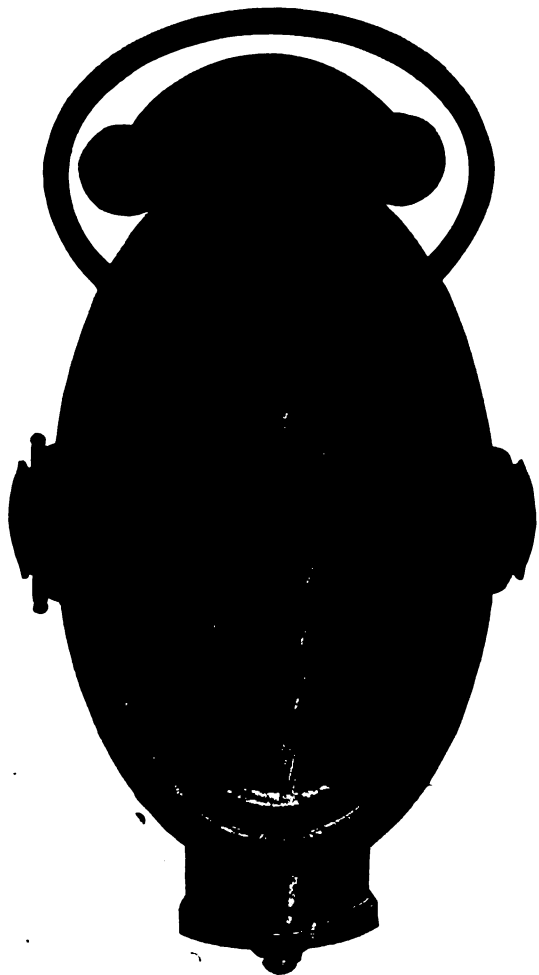
Eleven Springfield automobilists, who were on trial recently in the District Court in Westfield, Mass., charged with exceeding the legal speed for motor vehicles, were discharged by establishing the novel legal point that identification of the car by its registry number is insufficient cause for holding its occupants unless they are personally identified.

Mr. and Mrs. William Huston, of Columbus, Ohio, started last week on another long automobile trip. Last summer they made a tour of eight thousand miles, and have just returned from a seven-hundred-mile tour in Kentucky. The present trip will cover about fifteen hundred miles, and will be taken at leisure. It will probably occupy five or six weeks. They will go first to St. Louis, and after a visit to the exposition will proceed to Aberdeen, S. D.

J. W. Maguire, in a two cylinder Pierce car, returned to Boston on Wednesday after a five days' trip through the White Mountains. Accompanied by George S. Motley, of Portsmouth, he drove from that place to Intervale last Saturday. On Sunday, Monday and Tuesday they made trips to Fabyans, Jefferson and Jackson and on Wednesday left the Crawford House at 4:15 a. m. for Boston. They completed the run of 170 miles at 8 o'clock in the evening.

A 600 mile trip was made by Mr. and Mrs. A. S. Hitchcock and Mr. and Mrs. George H. Thomas, all of Providence, R. I., last week, in an Autocar. The party left Providence Saturday morning at 5:30 o'clock, and after pleasant stops in Worcester, Springfield, Hartford and New Haven, reached New York late in the evening. Sunday the tourists spent the day at Asbury Park and Long Branch, and on Monday started back homeward by easy stages, spending the night at Hartford. Tuesday the journey was continued to Springfield, where another stop was made, and early in the afternoon the ride to Providence was resumed, the party reaching home that evening.

After six weeks' experience in driving Pope-Toledo cars, two Athens (Ohio) motorists, H. G. Bartlett and Frank S. Lowry, are now en route to the West in Mr. Bartlett's Pope-Toledo machine, intending to be gone a number of weeks, perhaps all summer. Denver is their Western terminus, although they have several other objective points. They will first visit the fair at St. Louis, spending a couple of days there; next they will go to Kansas, where each is the owner of a ranch. The time they will spend there is uncertain, but, having concluded their visits, they will continue on to Denver. They expect to make the journey both ways in the automobile, and have a stock of supplies to meet every emergency.



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FOR LIGHT CARS ONLY

British Trials for 1904 to be Confined to Vehicles
Costing \$1,000 or Less.

Changes of a revolutionary character have been made in drafting the rules for this year's British Reliability Trials, with the result that they will be conducted on lines radically different from those followed in former contests. The committee of the Automobile Club of Great Britain has altogether ignored the cumbersome and complicated system of point formula which last year so confused matters as to make it impossible to submit an intelligible report, or to indicate, even indirectly, which was the best car in each class.

In the forthcoming contest, which begins August 27, the competing vehicles will be restricted to light cars of £200 (\$1,000) in price or under. It is designed to ascertain which is the most reliable vehicle for ordinary everyday work. There will be four classes for the competitors, according to price, as follows:

Class A—Not exceeding £125. Entrance fee £10.

Class B—Exceeding £125, but not exceeding £150. Fee £12.

Class C—Exceeding £150, but not exceeding £175. Fee £14.

Class D—Exceeding £175, but not exceeding £200. Fee £16.

The trials shall consist of 12 non-stop runs of approximately 50 miles each, starting from and finishing at the same point. A 50 mile non-stop run shall be made in the morning, and a similar run shall be made in the afternoon, for six days, a total distance of about 600 miles, and every car, in order to be eligible for any award, must complete the whole of the 600 miles.

Entries will only be accepted from manufacturers or their nominees. No manufacturer shall enter directly or indirectly more than two cars, which, unless there is more than 20 per cent difference in volume swept by the piston, shall then be run as a team; that is to say, each car shall be awarded marks equal to the average marks gained by the two cars.

Every entry shall be accompanied by a written guarantee by the manufacturer of the car to accept all orders from all persons for exact duplicates of the vehicle entered for trial, which may be given on or before December 14, 1904, and to deliver all such vehicles so ordered, complete and in perfect working order, on or before June 1, 1905, provided a cash deposit, not exceeding one-third of the price of the vehicle, is paid at the time of giving the order.

Any stoppage of the road wheels whatever, except for traffic or legal requirements, shall be considered as the end of a non-stop run; but, provided the engine is kept running, the car may be stopped with the consent of the observer.

If possible, there will be a timed hill climb every day. A car carrying more than two passengers throughout the whole of the trials shall be credited with an increase in speed over that actually shown on the hill amounting to 12½ per cent for each such additional passenger carried.

The changing of sprockets at any time during the trials shall not be permitted, except in the case of a breakage, when the new sprocket fitted must be of the same size as the broken one. Any car which drops a passenger shall be considered not to have made a non-stop run for that run. The fuel consumption will be taken on one or more days.

Sufficient time will be allowed for replenishing petrol and oil tanks, etc., at the beginning of each run. Notes will, however, be made by the observer. Any vehicle which refills tanks or replenishes lubricators when under way will be considered as not having made a non-stop run.

At the end of the first run on any day nothing shall be done to the car except turning on the fuel and lubricating taps and switching off, until the order to commence repairs and adjustments for the second run is given by the observer. At the conclusion of the second run on every day nothing whatever may be done except the washing of the car, and turning off the fuel and lubricating taps, and switching off.

Washing must be done only in the presence of the observer of the car, a maximum period being allowed every evening, to vary according to the condition of the roads.

The committee will give awards on the recommendation received from the judges appointed by the club, as follows:

(a) The first award in respect of non-stop runs in each class shall be given to the car which makes the greatest number of non-stop runs. If there be more than one car or team in a class making the same number of non-stop runs, the award shall be given to the car or team which is credited with the highest average speed on the hills in the trials.

(b) A car which occupies more than 20 minutes before any run in repairs, replacements or adjustments is precluded from receiving any award in the non-stop competition.

(c) A car which is stopped for more than 20 minutes for repairs, replacements, or adjustments on the road during any one run is precluded from receiving any award in the non-stop competition, except in case of repairs wholly connected with tire trouble, which shall cause that car to forfeit its non-stop for that run, but shall not disqualify it for the non-stop award.

(d) Cars not ready to start by 11 o'clock in the morning for the first run of the day or by 3 o'clock in the afternoon for the second run of the day, and cars not completing the 100 miles by ten minutes past 7 o'clock in the evening of every day for Classes B, C and D, or by 8 o'clock for Class A, will be disqualified from all awards, and must take no further part in the trials.

RACES ON OLD ORCHARD BEACH

Two Meets Each in July, August and September Projected for Maine Resort.

There will be automobile racing at Old Orchard Beach, Me., this summer after all. Frederick Yates, manager of the Old Orchard Pier, thus outlines the plans:

"There will be two races in July, two in August and two in September, and almost immediately after the Fourth, and as soon as I have got everything running smoothly at the pier, I shall start preparation for the races.

"There will be two races on each day, one of five miles and one of three miles. The start will be at Googins Rocks, which will not be blasted out as was originally intended, and the finish of the five-mile will be at Pine Point, near the Nonesuch River, while the three-mile will be at Grand Beach, which will give the many cottagers at this exclusive resort a splendid opportunity to watch them.

"Two spans will be taken out of the pier instead of one, as was originally intended, so as to make the course wider at that point. Heavy timber trusses will be used to strengthen the pier at this point.

"The beach was never in finer condition than this year, and there is no reason why the races shouldn't be a success."

Firemen to Inspect in Automobiles.

When the annual inspection of the Newark, N. J., fire department takes place this week, it will be made in automobiles, the fire commissioners having arranged to make the trips from fire house to fire house in such vehicles. Commissioner Burke will handle the wheel of one car, Commissioner Blanchard the second and Chief Engineer Klersted the third. Mayor Doremus, his secretary, Captain C. Albert Gasser, and Alderman Pennington and John B. Wood have been invited to accompany the party as guests. The reason motor cars have been chosen instead of horses and carriages is that with the former better time can be made, and it will be possible to finish the inspection in one day.

Horse Hires Hard Hit.

This season more than ever the automobile is being taken up by the people at the summer resorts, and the proprietors of livery stables and the drivers of cabs and carriages who used to make a good living in the summer time from the visitors are lamenting the advent of the machine. People who never rode behind horses are enthusiastic automobilists, while regular patrons of the horse and carriage owners prefer a motor car whenever they go out to a carriage.

It is interesting to note that out of the eighteen starters in the Bennett cup race ten were fitted with the magneto system of ignition. The first five cars to finish were fitted with this ignition and no less than eight out of the first twelve.

COMMERCIAL CARS' UPKEEP

Reasons of Economy Impel French Company to Undertake it, With Good Results.

In calculating the various items of working cost for industrial vehicles, the one which makes all the difference between the success or the failure of a public or private service is the cost of maintenance. The owners have a fairly accurate idea of the gasoline consumption and are able to balance their general running expenses, but when it comes to the cost of maintaining the vehicles and keep them in good working order, they find that the enterprise takes upon it the character of a risky speculation, says the International Motor Review.

If they have good mechanics they can rely upon the cars being run economically and always being ready for work, but it more frequently happens that the vehicles are placed in the hands of men who have not a sufficient knowledge of the cars they drive, and, while they may considerably increase the running expense, it is possible that the cost of maintenance will be doubled or trebled. Moreover, while a large number of industrial cars are employed, they can only be run satisfactorily in the event of the owner being specially equipped for keeping them in good condition. This means that he must have a workshop and a number of good mechanics, who must, of course, be kept fully employed if the money spent upon them is to be returned with profit, which, of course, would be scarcely possible in the case of owners running only a small number of vehicles. It is mainly for this reason that so many private and public motor car services have failed to come up to expectations, and that the cab companies themselves seem for the moment to have abandoned their experiments in the way of replacing horse drawn cabs with motor cars.

Obviously, therefore, the only people who can successfully carry out undertakings of this kind are those who possess workshops and a competent staff of men, and can keep a large number of cars in constant use. This is the direction in which the industrial car movement is just now developing in France. For some time past three or four of the leading makers have been hiring out vans to tradespeople for a fixed sum, which covers the whole cost of running the cars and keeping them in order, and as the expenses are, of course, much less to the maker than to the private owner, the tradesman finds that he can employ delivery vans under these conditions with much more economy than is possible with horse drawn vehicles. The success of this experiment has induced capitalists to form companies for the hiring out of delivery vans and wagons. They have their own workshops and a carefully selected staff of men, and undertake to reserve cars exclusively for customers who have their names painted on them, or else hire out the cars as

may be required by different tradespeople. In this way the running costs are considerably reduced for the work done by the fact of their being constantly in use, and as they are in the hands of skillful drivers, and repairs are effected at small cost, the enterprise becomes profitable alike to the company and to the customers.

This system of hiring out industrial vans is growing so rapidly in Paris that one of the companies, known as the Auto Transport, is doing quite a considerable business. The same thing is also observable with the cabs. As the existing cab companies have not been encouraged to replace their vehicles with motor cars, some new concerns have recently been created for putting gasoline cabs on the streets, and as they are properly equipped for this service, the business appears to be paying remarkably well. Negotiations are even being made in Paris to induce the Prefect of Police to sanction a higher tariff for motor cabs, and in the event of this being done we shall certainly see a considerable increase in the number of gasoline cabs on the streets. All this proves what we have before said, that the success of delivery vans, wagons and cabs will depend in the future upon their being hired out by concerns which are able to keep down the cost of maintenance to a minimum.

Won't Pay Toll on Bad Roads.

Fifty automobile owners of Lancaster County effected an organization at Lancaster, Pa., last week for the purpose of fighting the toll rates charged on the turnpikes in the county. In some instances the rate is three cents a mile for bad roads.

These officers were elected: Jacob Rider, president; Dr. E. B. Ilyus, secretary, and Dr. P. P. Brennan, treasurer.

A number of the automobile owners have refused for the last six months to pay toll. Lawsuits for the non-payment of toll have been invited and a test case would be welcomed, the owners of automobiles claiming that the turnpike companies are violating their charters in a number of directions. The companies say the matter will be taken into the courts.

Hotchkiss Tours Fifteen Hundred Miles.

President W. H. Hotchkiss of the Buffalo Automobile Club has reached home after a fifteen-hundred-mile tour in a 24 horsepower touring car. Mr. Hotchkiss, accompanied by Mrs. Hotchkiss and Fred. Honegger, left Buffalo on June 15. The stages of the trip were Avon, Ithaca, Auburn, Little Falls, Albany, Lenox, Worcester, Boston, Springfield, New York, Newburg, Albany, Little Falls, Clyde, Buffalo. A stop of two days was made at Lenox, in the Berkshires, while two days were occupied by side trips out of Boston. The entire distance travelled by the car was 1,500 miles. The longest run in one day was the 140 miles from Springfield to New York.

The performance of the car was most satisfactory. The only expenditure for repairs on the whole journey of 1,500 miles was 15 cents for a bolt.

CARS FOR WAR DEPARTMENT

Two Wintons are Ordered for Use [During the Forthcoming Summer Manoeuvres.

The War Department at Washington has placed orders for two Winton touring cars, one of which is to be used by the Atlantic department and the other by General MacArthur in the manoeuvres of the State and national troops in August. The department has been trying out the different makes of automobiles during the last year, and the Winton touring car was chosen on account of its power, durability of its working parts and simplicity of control.

The car to be used by General MacArthur is fitted to be used as either a telephone and telegraph office or a repair car. Provision has been made for the car to carry a folding table, wire, insulators, brackets, hammer, nails, a digging bar, pliers, block and tackle and six lance poles, two box relays, one sounder, one service telephone, one two-line telegraph switchboard, two conductor's lanterns, eight cells of dry battery, one field buzzer, two calcium carbide generators, pencils, telegraph message blanks, etc.

A complete record will be kept of the number of miles the car runs, the fuel consumed, the number of days or hours in which the machine is out of commission, due to accident or wear, and, in fact, such complete data as will enable the War Department to judge as to whether automobiles are practical for army usage.

Russians Buy French Inspection Cars.

The war in Manchuria is having an unexpected result in bringing business to French motor car firms. Having to keep their long lines of railway communication intact, the Russian war authorities have ordered from Messrs. de Dion-Bouton an inspection truck propelled by an 8 horsepower engine and capable of carrying six persons at a speed of twenty-five miles an hour. The vehicle has recently been dispatched to Siberia, and if it fulfils the requirements of the War Department it will be followed by an order for thirty more.

Lynn Motorists Organize.

Preliminary steps to the forming of an automobile club in Lynn, Mass., were taken last week at an informal meeting held in the Board of Trade rooms. The initiative was taken by Thomas W. Gardiner and Walter S. Haliburton, who were chosen chairman and secretary, respectively, of the meeting. There are nearly three hundred owners of automobiles in Lynn, and nearly all of them have signified their intention of joining the proposed organization.

ANOTHER "FIRST" AUTOMOBILE

Judge Nathan Read Produced Model in Eighteenth Century—Congress Laughed at Him.

It is related that seven cities of ancient Greece claimed the honor of being the birthplace of Homer. More than that number of cities now lay claim to having been the birthplace of the first automobile. Salem, Mass., the city of witches, is the latest claimant, and Judge Nathan Read is the inventor on whose behalf the claim is made.

Plans for the first automobile in this country caused such a laugh in Congress that the man who presented them, Judge Nathan Read, turned away from the honorable body in disgust. Congressmen considered Read a visionary. But Read believed that steam locomotion would revolutionize the country, develop the great West, and bring all sections into close contact, and he spent most of his life in working out problems of steam locomotion. Time proved him a man a century ahead of his fellows.

The discoveries of Watt, in England, attracted Yankees to steam power possibilities. Watt intended to harness steam for the mills and mines only. But several Yankees, James Rumsey, of Maryland; John Fitch, a Connecticut genius, and Nathan Read, believed that it was possible to use steam for propelling vehicles both on land and water. Success did not crown their efforts. Fitch died with the prayer that he might be "buried by the riverside, where the music of the steam engine would soothe his spirit." Read made models both of steamboats and steam carriages, and it remained for Fulton to make the first steam engine, such as the earlier geniuses dreamed of.

Read began the study of steam in 1788, when he was an apothecary in Salem, Mass. He succeeded in producing a "portable furnace boiler," which he patented in 1791. His invention was a wonder to many, and even those who thought it might be possible to make a portable boiler also thought that the boiler would be blown up if supplied with fuel or water during its movements.

Read intended this boiler for both steamboats and land carriages. He made models of both, and the American Academy of Science approved of them. He exhibited them to President Washington and to the public of New-York. Congress granted his petitions for patents as far as they related to steamboats, but laughed at his steam carriage proposition, and Read turned away from that body in disgust. Later he was sent to Congress by his constituents.

It appears that Read gave up his experiments with steam for propelling carriages and boats when he was close to victory. The model of his steamboat lay neglected for some time in his apothecary shop in Salem, while he engaged in other pursuits. Several of his models were destroyed in the Patent Office fire.

Read was a remarkable man, a sort of a Paul Revere, for he engaged in many enterprises. He was graduated from Harvard College in the class of 1781, and he taught Hebrew while in college. He studied for the ministry in college, but, after graduating, he took up medicine with the famous Dr. Holyoke, of Salem, and he opened an apothecary store. He gave much time to the study of mechanical arts.

He also settled upon the Porter farm, in Danvers, helped to build an early iron mill near his farm, constructed the Waters River bridge after the State failed to do it. The iron mill is running and the bridge stands to-day.

He was sent to Congress from the Essex district, was made special justice of the Court of Common Pleas, and later, while residing in Belfast, Me., he became a chief justice. He gave much time to agricultural pursuits, and made a number of valuable improvements in agricultural implements. He also was a leader in public improvements, especially for the bettering of schools.

At the age of eighty-eight he began to write his autobiography. He left carefully prepared papers telling of his life and of his experiments with steam. His descendants, who hold these papers, say that his inventions were like those of Fulton of the steamboat and Stephenson of the steam engine.

Why Motors Sometimes Overheat.

In a number of motors, although the compression is good, power is not developed in accordance with the size of the cylinders, and there appears to be a decided tendency to overheat in the engine. This is often due to using a lubricating oil which is not suitable for the type of engine, as it is found that an oil which gives good results with one type is worthless for another. An oil may appear thick, and yet under the heat and working conditions may thin out to such an extent as altogether to lose its lubricating quality. If this is experienced with water-cooled motors, a good brand of oil usually employed for air-cooled motors should be tried. The results will be found to give satisfaction in most cases.

Chloride of Calcium to Lay Dust.

Chloride of calcium has been tried as a dust preventive on English roads. A solution of the calcium was applied by means of water carts, and it was found that one application will keep the roads in an agreeably moist condition for a lengthy period without further resource to watering. It is said that the calcium compound does not injure motor and cycle tires, while it lessens rather than increases the danger of "skidding."

Providence Meet Uncertain.

It has not yet been decided whether the Rhode Island Automobile Club will give a race meet this year or not. If one is held, it will probably occur some time in August, instead of in September or October, as in previous years. The reason for this change in time is the large number of automobile events that will take place in September and early October.

OVER REVERE'S ROUTE

G. A. R. Veterans to be Taken to Historic Lexington and Concord in Automobiles.

The long contemplated plan to give the battle-scarred veterans of the Civil War an automobile outing on the occasion of their visit to Boston next month, when the annual encampment of the G. A. R. takes place, seems likely to be completely successful. It will be an immense affair—by long odds the biggest automobile event yet seen. It is estimated that nearly two thousand veterans will be carried in between six hundred and seven hundred automobiles over the historic route traversed by Paul Revere and the American and British troops in the opening battle of the war of independence.

From within sight of the tower of the old North Church—from which the famous rider received his signal—and from within sight of the Bunker Hill Monument, the party will move out on the old Bay road, now known as Massachusetts avenue. Over the Charles River into Cambridge the visitors will be taken past Harvard College and the old Washington elm, where Washington assumed command of the Army of the Revolution. Here, also, will be seen the old Longfellow home, and the house where James Russell Lowell lived.

Over one of the finest roads in the country they will reach Lexington, where they will see the old Monroe Tavern, which is rich in historical lore. Here is where Earl Percy, with his reinforcements, was enabled to hold back the American patriots while he converted the tavern into a hospital. Here, also, is a chair in which Washington sat while on his visit to Lexington in 1798. Six miles beyond Lexington the visitors will arrive at Concord, also rich in its historical associations. Here is the old manse where Nathaniel Hawthorne brought his bride in 1842.

The number of automobiles necessary to make this procession will be large; the line will be very long. As they start they will diverge, one-half pursuing one route and the other half another, meeting at a point on the route, probably Concord, each passing in review before the other section. The automobiles will be loaned, and in many cases driven by their owners.

Alden Drives to White Mountains.

H. W. Alden, superintendent of the Electric Vehicle Company, is vacationing in the White Mountains. He drove from Hartford to the Mt. Pleasant House in two days in one of the light Columbia gasoline cars. On the first day's run, which ended at Lakeport, thirteen miles an hour was averaged, over all sorts and conditions of roads. No trouble of any kind was experienced.

In India the power developed by a motor is sometimes expressed in elephant equivalents. Thus a 22 horsepower motor is described as a 3 elephant-power vehicle.

EFFICIENT NON-SLIPPERS

Toledo Man's Device Enables Car to Climb 46 per cent Grade Without Difficulty.

Grades of from 20 to 46 per cent, especially the latter, are not encountered every day, nor when they are encountered are they easily surmounted. When failure comes it is due to one of two causes. Either the engine does not develop sufficient power, or there is not sufficient traction on the wheels to prevent them from revolving uselessly and without making progress.

Devices of many kinds have been put out designed to make the driving wheels grip the road sufficiently to give traction even on the steepest hills. One of the latest of these has been designed by Archie Hughes, the well known Pope-Toledo salesman, and tested with splendid results. Hills ranging from 20 to 46 per cent in steepness were climbed easily, the 46 per cent hill being surmounted half a dozen times to make assurance doubly sure.

The device is in the shape of a steel band, in two parts, which fastens around the tire and rim of the rear wheels of the car. On the outside of the band is a piece of brass about three-quarters of an inch thick, which acts like a spike on baseball shoes. The device can be attached to the wheel of an automobile in less than a minute, and simply by the tightening up of a thumb-screw. In active use it is intended that three of these "spurs" shall be attached to one of the rear wheels, and it is thought that they will be able to prevent waste of power to enough extent to enable automobiles to climb hills that have always been considered insurmountable.

An exhaustive test was given to the invention recently by Herbert Lytle, head of the testing department at the Pope factory. Instead of three, only one of the clamps was put on the rear wheel in order to make it stand the entire strain. It fulfilled all expectations. Grades from 20 to 46 per cent were used for the trial. On the steepest grade, the 46 per cent, a start on level ground of little more than the length of the stripped car was taken, and it was sent up the incline on the second speed instead of the low speed, which made the test considerably harder than it would be ordinarily.

The grip of the spur on the soft meadow ground could be felt perceptibly and the places where the brass slug had dug into the turf made an accurate trail of the course of the machine. The trip up the 46 per cent grade was made half a dozen times, and twice the big four cylinder car was run down backward to see where the clamp would slide on the rim. It did not.

"With this device," Hughes said, "there is no waste of time. Suppose there was one very steep hill which you wished to climb while on a tour. You would not want to go to the bother of winding your

tires with rope, for it alone and perhaps the hill would block your whole trip otherwise. With this device, however, you will lose only a minute at the bottom of the ascent fastening the three clamps on and another at the top, taking them off. They are small enough, too, so as not to take up any room when not in use. I am thoroughly satisfied with its efficiency as a result of the tests made."

How to Test the Brakes.

Frequently new cars are delivered during the season and the purchasers naturally imagine that they are sent out properly regulated and adjusted. They may be so, but in some cases they are not. It is an excellent plan to take nothing for granted. The first thing to do is to see that the brakes on the back wheels are properly adjusted.

This is a simple matter. Both back wheels should be jacked up clear of the ground. The hand-lever should be applied notch by notch, and the wheels turned by hand until one of them is felt to be gripped by the brake. If in perfect order the brake should hold the two with equal strength. Each back wheel should be revolved in turn with the brake gently on to see if it holds evenly. By pushing the brake lever forward gradually one can more easily find out an uneven application. The brake rods should be tightened up or loosened until each wheel is gripped with even tension. When the brake lever is hard on both wheels should be immovable.

In some types of car the side-brake when applied releases the clutch, and in adjusting the brake rods it is necessary to see that the cam operating the clutch just clears the lever and allows the clutch-spring to let the clutch right in on releasing the brake. It should also be so adjusted that it pulls the clutch right out when the brake is on.

Dangers That Lurk in Pits.

Motorists who work about their cars at odd times should be careful how they descend into the pit when the motor is running. If the latter should be missing explosions the unexploded mixture accumulates in the pit and is inhaled by the person working there, who in a short time is overcome by the fumes.

The phenomenon is a familiar one in all works where blast furnace and producer gas is employed. A man who gets his lungs well filled with either of these may be unconscious for several hours, and his contortions are frightful to witness, though fortunately not painful to himself. The exhaust from an engine that is missing fire is, of course, a mixture of carbonic acid and hydro-carbons, not dissimilar in chemical composition, and, consequently, physiological effects, to producer gas.

An ordinance has been introduced in the Akron (O.) Council providing for a tax on all vehicles. That for automobiles with one seat is fixed at \$5, and \$8 for two seated ones.

COMPLAINS OF SECTORS

They are Placed too low to Give the Best Results in Changing Gears.

One of the things which puzzles me, and has puzzled me for a good long while, is why so few cars are provided with sensible gear changing arrangements, remarks an observant motorist.

In the majority of cases the toothed sector which holds the gear changing lever is placed close to the lower end of the lever so that the teeth are very close together, so close, indeed, that there is often less than a quarter of an inch between the six spaces necessary for four speeds, neutral position, and reverse. Sometimes the matter is complicated by having these teeth, which are so close together, underneath the sector. Now, why on earth cannot the toothed sector be placed at least eight or ten inches above the lower end of the lever? There would then be an inch or so between each of the teeth. The lever itself would pass through exactly the same space it does now, but with a convenient interval between the teeth there would be much less fear of gears being missed or in the reverse being put in.

With these very small sectors it is quite impossible to see from the driving seat whether the spring catch of the change speed lever is in the reverse or neutral notch. In fact, it seems to me that some of the sectors are specially designed to make trouble and to insure that a man, till he has driven his car for some thousands of miles, shall damage his gears in changing, or, if he does not damage them, miss them very often in the most annoying way, so that he is bound to crawl up hills on his first speed when he could have gone up easily on his second.

Coachmakers' Prize for Auto Design.

In spite of the age denoted by its title, the venerable "Worshipful Company of Coachmakers of London" does not propose to be left behind in the race for progress. In this year's competition for coach designs the company included one for a design of an automobile body to carry five or six people and suitable for a gasoline engine. Ten competitors were entered.

The first prize of the company's silver medal and six guineas fell to Mr. A. R. Meier, of Redhill. Two of the judges were appointed by the Automobile Club of Great Britain.

Where Motorists are Appreciated.

"Automobiles are greatly improving the hotel business in this city," said the proprietor of a Portsmouth, N. H., hotel recently. "It would be surprising to read the actual figures of the number of people who come here in the touring cars in the course of a week. They turn hundreds of dollars of welcome money into the pockets of the citizens."

FRIEND OF THE FARMER

The Small Internal Combustion Engine is so Characterized—Its Manifold Uses.

The American farmer is becoming more and more a factor in the metal industries of the country. This does not apply exclusively to the farmer of the West and Middle West, who, fortunately for him, is not dragged down by the traditions of the old home place where his father and grandfather have eked out an existence. It applies also to old New England and to New York State and to other of the older farming sections, remarks the Iron Age.

The farmer has been going through an apprenticeship of mechanics, as applied to husbandry, until he may be considered to be approaching the plane of intelligent understanding of the advantages which must come with the employment of other than man power to do his work. It was not long ago that the mowing machine manufacturer despaired of ever teaching a farmer to take intelligent care of his machine. Even the simple idea of sufficient lubrication of machine parts could not be mastered. He would not believe that it would pay better in dollars and cents to use oil than to use lard or butter or buttermilk. Nowadays mechanical progress has reached him, and being an American, he is quick to put his new comprehension of things to his advantage.

Among other things, he is buying combustion engines to do work that has heretofore cost him \$20 a month and the board of a farm hand. Builders of this type of engine can show hundreds and thousands of inquiries to prove that this demand is only in its infancy. The little engine on the farm does wonders. The farmer may have the kerosene engine, which appeals to many because the family kerosene can is always handy, or he can have the gasoline engine. With either he does not have to depend upon the wind to pump his water for him. The initial cost of the engine is no greater than that of the wind engine. He may mount the engine on a truck, at the other end of which is a circular saw, which is a common practice. When he wants to pump water he hauls the truck to the pump pulley and puts on the belt. When he wants to saw wood he hauls his engine and saw to the woodpile. When he wants to cut fodder he hauls the truck to the machine for the purpose. In the spare time of the winter months—or in the summer, for that matter—his engine provides power for his little workshop, and here is an influence of the farm engine, for it leads the farmer to buy power tools and do his own repair work and other work which he would otherwise have to pay good money for or go without. If he has a dairy, the engine is a handy source of power for operating the modern dairy machinery. Other special uses are frequently noted.

All this is a first rate investment in dollars and cents, which is easily evident, because the farmer has only to think of farm hands at \$20 or more a month and board, and he sees that the balance is all in favor of the engine and its fuel plus the interest on the comparatively small cost of the machine and its repairs. It must not be understood that the windmill is not a very useful adjunct to a farm. But comparatively few Eastern farmers have a windmill, and water supply alone is not considered in the engine investment.

The cheap and reliable water supply has a far-reaching influence. The American farmer of the progressive type—and his number is always and rapidly increasing—desires comforts for himself and his family. He travels more, reads more and consequently learns more of what makes life worth living. He pipes his house and barns for water. He next installs what until recently were considered on the farm as ultra-luxurious sanitary conveniences. Thus, he makes a new market for the manufacturers of plumbers' supplies. In this and many other ways the little engine brings about a prudent but constant betterment of home and farm conditions. Generally, this means a greater profit per acre of land, for enterprise once aroused where enterprise did not exist begets increasing progress. Just as a good mechanic needs good tools, so must the modern farmer have good tools, and he knows it. He sees his successful neighbors prospering because of modern methods, and he follows their lead, or else there is, sooner or later, another "abandoned farm" waiting for a man of modern business impulses to take up and work with profit.

Jersey Towns Want Auto 'Buses.

Many of the towns in South New Jersey are without railroad facilities of any sort, and many plans to furnish quick and regular methods of communication between them have been suggested. Of late years the automobile 'bus has received favorable consideration. The roads are good in the main and level, and there is no reason why automobiles should not prove eminently satisfactory. A line between Salem and Bridgeton, towns of about ten thousand population each, is projected, and now several local capitalists are considering a scheme to start a route from Malaga to Pitman, taking in Franklinville, Clayton and Glassboro.

Breaks a California Record.

The Los Angeles-Santa Barbara automobile record has again been shorn. This time fourteen minutes were clipped from it by H. T. Lally, a San Francisco motorist. A week ago Lally obtained the figures of the then record run and made an attempt to beat all former schedules. He failed at that time taking wrong roads and consuming seven hours in the trip. In a second attempt, however, he was successful in breaking the record. He left the hotel Van Nuys at 12:55 o'clock and arrived at the Potter at 6:16 o'clock the same evening. The best former record was one of 6 hours and 35 minutes.

MOTOR CAR DESIGN

It Fails to Find Favor with Artists, but They Suggest no Improvement.

A great many people who do not own motor cars, and a very few who do are dissatisfied with the appearance of the motor car of to-day. They complain of its lack of gracefulness; but, unfortunately, they never get any further, remarks the Autocar. A correspondent refers to the handsome appearance of a fine railway locomotive, and the symmetry of a modern battleship. We are entirely in accord with him, but we cannot see how the artist can help to improve the design of the motor car, as it is necessary to remember that the locomotive and battleship have come to their present state entirely without the assistance of the artist; in fact, the great majority of artists can draw neither the one nor the other.

It must not be imagined that we think it impossible to improve the appearance of the motor car. Far from it. But there are some types which, so far as combination of symmetry and fitness for the work they are called upon to do are concerned, would be very difficult to beat. At the same time, it would be an excellent thing if the prejudices of those who object to the look of the car could be overcome if only we could find out what sort of thing they would like. Up to the present their criticism has been entirely of a destructive character, and we do not seem to have made any progress in ascertaining what their ideal outline is. The only thing on which they are in most cases agreed is the question of the bonnet. They do not approve of the motor bonnet at all, but the cars which have no bonnets are not what they want.

A great deal is said about flowing outlines and graceful curves, but any makers who have attempted these have certainly not received remarkable encouragement, and there appear to be a great many more people who would not buy a motor car unless it looked like one than there are of the class which abstain from buying because the motor car does not look like something else; whether it is a swan-shaped basket on wheels or a modernized Roman chariot no one seems to know.

We have spoken strongly, not because we are out of sympathy with those artistic souls who are dissatisfied with the modern car, but because we want to find out what their ideal is. So far as we are personally concerned we consider a well proportioned car of the conventional type a remarkably clever design, as it has an individuality of its own, and, at the same time, a great deal of that symmetry which shows that it is really cut out for its work. However, we should only be too pleased to see something better if it can be suggested, and we have little doubt that those concerned in the design of motor cars would be equally pleased.

The Week's Patents.

763,321. Storage Battery. Henry C. Porter, Waukegan, Ill., assignor to Porter Battery Company, Chicago, Ill., a Corporation of Illinois. Filed Nov. 25, 1901. Serial No. 83,601. (No model.)

Claim.—1. A battery plate comprising a grid provided at one end with a shoe of non-corrosive material, and inclosed within a metallic sheath, substantially as described.

763,477. Transmission Gear. Frank G. Gies, Detroit, Mich. Filed December 18, 1902. Serial No. 135,694. (No model.)

Claim.—1. In a transmission gearing, the combination, with the driving shaft, of two gears secured thereon at a distance apart, two gears loose on the shaft between the fixed gears, a sprocket wheel secured to the loose gears, a rotatable casing at each side of the sprocket, and inclosing said gears, gears of different diameters carried by said casings, the gears in one casing being in mesh with both the fixed and loose gears on the shaft in that casing and the gears in the other casing being out of mesh with the fixed gear on the shaft and in mesh with the loose gear, intermediate gears carried by the last named casing to transmit motion from the fixed gear on the shaft to the gears carried by the casing, friction bands to engage the said casings and prevent the same from turning, and means for connect-

ing one of said casings to the shaft to turn therewith.

763,494. Automobile. Louis Lacoïn, Paris, France. Filed December 26, 1903. Serial No. 186,723. (No model.)

Claim.—1. A stiff framework for automobiles; the said framework being adapted to be easily dismountable and including for this purpose two parts which are respectively provided with one axletree, and which support respectively the motor parts and the carriage body; the two said parts being further adapted to be connected together by any suitable means providing an easily releasable device for attachment, in order to constitute, by uniting of the said two parts, a true stiff framework lying upon two axletrees, substantially as described.

763,495. Electric Lighting System for Vehicles. John A. Little, St. Louis, Mo., assignor to the Globe Electric Company, St. Louis, Mo., a Corporation of Missouri. Filed October 3, 1903. Serial No. 175,626. (No model.)

Claim.—1. The combination with a dynamo electric machine, the armature of which comprises a plurality of circuits, of an electric battery energized from one of said circuits, and electro-magnetic means energized from another of said circuits for controlling the flow of current through said battery.

763,535. Explosion Motor. René Algrin,

Paris, France. Filed September 20, 1901. Serial No. 75,815. (No model.)

Claim.—1. In a four stroke cycle explosion motor, a working cylinder and its piston, a compression cylinder communicating with the working cylinder, a piston in the compression cylinder and a piston rod therefor, a crank pin or arm to which the piston rod is connected, means for oscillating said crank arm on its axis to move the piston rod and its piston, and adjusting means for moving said crank arm or pin toward or from its axis of oscillation, thereby varying the amplitude of the stroke of the compression chamber piston.

763,539. Pneumatic Tire Covering. George F. Brown, Hurstville, New South Wales, Australia. Filed November 25, 1902. Serial No. 132,797. (No model.)

Claim.—A reinforced covering to the air tubes of pneumatic tires, such reinforcement consisting in pasting two or more thin strips of textile fabric, one upon the other, within the covering, such thin strips having been previously prepared by coating and saturating them with a cement composed of animal glue, plaster of Paris, powdered plumbago, red ochre and water, in the proportions and in the manner, approximately, as herein set forth.

763,548. Two Speed Reversing Gear. Frank A. Ferguson, Blanchard, Iowa. Filed August 21, 1903. Serial No. 170,344. (No model.)



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Quality and Workmanship of the Highest Standard Only.
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THE BIDDLE & SMART COMPANY, Amesbury, Mass., U. S. A.

Claim—1. The combination in apparatus of the class described, of a shaft, a pinion fast on the shaft, a pinion loose upon the shaft and having a sleeve encircling the shaft, a gear casing inclosing said pinions, gearing carried by said casing continuously in mesh with both of said pinions, a pair of gears of different sizes loosely journaled upon said sleeve, devices for locking said gear casing in stationary position or for rotation with said shaft, and means for locking either of the pinions upon the sleeve for rotation therewith.

763,602. Convertible Tourist and Automobile Cap. Robert Fox, New Rochelle, N. Y., assignor to Saks & Co., New York, N. Y., a Corporation of New York. Filed April 1, 1904. Serial No. 201,135. (No model.)

Claim—1. A convertible tourist and automobile cap having a visor and mask secured to its front and back, respectively, the visor being fitted to be folded out of the way within the cap when the mask is in use.

763,626. Exhaust Muffler for Explosive Engines. Dore Ogden, Columbus, Ind., assignor of one-half to Koert Dubois Hawley Reap, Columbus, Ind. Filed July 13, 1903. Serial No. 165,307. (No model.)

Claim—1. A muffler including an annular chamber, a yielding receiver having sides extending into the annular chamber, and partitions attached to the bottom of the chamber and extending into the receiver and encircled by the annular chamber.

763,769. Motor Driven Cultivator. Eduardo Imperiale, Naples, Italy. Filed June 27, 1903. Serial No. 163,337. (No model.)

Claim—1. The combination with a wheeled frame, of a motor shaft, a worm thereon, a worm wheel with which the worm is meshed, a rotary shaft carrying the worm wheel, a crank arm driven from the rotary shaft, a beam pivotally connected to the crank arm intermediate at the ends of the beam, a tool carried at one end portion of the beam, and means in connection with the other end of the beam for restraining the same within certain limits.

763,773. Rotary Explosive Motor. Charles A. Marlitt, Portland, Ore. Filed March 12, 1903. Serial No. 147,486. (No model.)

Claim—1. A rotary explosive motor, comprising a cylinder, a piston mounted therein, and provided with a diametrical channel and an inlet thereto, a mixing chamber communicating with said channel and with the cylinder, and piston wings mounted to reciprocate in the channel, and constructed to compress the air in the channel and force the same into said mixing chamber.

763,871. Combined Brake and Mud Guard. Frank L. Fisher, Cumberland, Md. Filed January 6, 1904. Serial No. 187,955. (No model.)

Claim—1. The combination with a vehicle having a wheel, of a crank shaft journaled upon the vehicle, an operating lever, a rigid connection between said lever and the crank shaft, an arm extending from the crank shaft and adjacent the wheel, a mud guard pivoted to said arm and normally supported thereby above the wheel, a triangular lug upon the arm, and a spring secured to the guard and normally contacted by the lug.

763,931. Motor Vehicle. Frank Schlais, Gad, Wis. Filed September 10, 1903. Serial No. 172,661. (No model.)

Claim—1. The combination with a motor vehicle, of two wheeled trucks on which said vehicle is pivotally mounted, hounds rigidly

connected to said trucks and provided at their adjacent ends with intermeshing toothed sectors, two chains connected to one of said sectors, means for drawing up one of said chains and simultaneously slackening the other for moving said sectors to the right or left to turn the wheeled trucks simultaneously in opposite directions, and guides for guiding the sectors in their movements, comprising a pair of parallel beams, said beams extending transversely beneath the bed of the vehicle and rigidly connected therewith, one of the beams being arranged above and the other beneath the sectors, substantially as and for the purposes specified.

763,949. Means for cooling automobile engines. James C. Anderson, Jersey City, N. J. Filed January 21, 1904. Serial No. 189,963. (No model.)

Claim—1. In an automobile, a multicylinder engine arranged with its cylinders in a fore-and-aft line, a casing covering the engine, said casing having an opening to one side of the engine and an exit for air on the opposite side of the engine.

764,020. Electrically propelled vehicle. Russel Thayer, Philadelphia, Pa. Filed April 11, 1904. Serial No. 202,526. (No model.)

Claim—1. An automobile provided with an electric motor and a storage battery; having wheels constructed and arranged to traverse the tracks of a railway supply system, with said motor in operative connection with said system, and, to traverse a trackless roadbed, independently of said system, with said motor in operative connection with said battery, substantially as set forth.

764,048. Acetylene gas generator. Nelson Goodyear, New York, N. Y., assignor to the J. B. Colt Company, New York, N. Y., a corporation of New Jersey. Filed September 21, 1903. Serial No. 174,021. (No model.)

Claim—1. A carbide canister for an acetylene generator having openings in the top and bottom, a tub through one opening into the canister, with a drip opening therein, a screen surrounding said tube, and means for sealing the joint between the tube and the canister to prevent the entrance of water and the escape of gas around the tube, for substantially the purpose set forth.

764,063. Driving mechanism for automobiles. Harry B. Maxwell, Rome, N. Y., assignor, by direct and mesne assignments, to the Maxwell & Fitch Company, Rome, N. Y., a corporation. Filed April 16, 1904. Serial No. 203,461. (No model.)

Claim—1. The combination with a constantly driven shaft, of a pair of friction wheels mounted thereon and movable independently toward and from each other along the shaft, a disk supported in a plane parallel with that of the shaft and a shaft on which the disk is mounted to rotate, and means for moving the said friction wheels along the shaft from a point approximately at the center of the disk to a point beyond its periphery, substantially as set forth.

764,132. Detachable flange for rubber tires. Cadwallader W. Kelsey, Philadelphia, Pa. Filed April 26, 1904. Serial No. 204,938. (No model.)

Claim—1. A fastening device for a detachable flange of a rubber tired wheel which consists of a bolt whereby the flange is secured to the felly of the wheel, and a removable clamp, inserted between the flange and the bolt, substantially as described.

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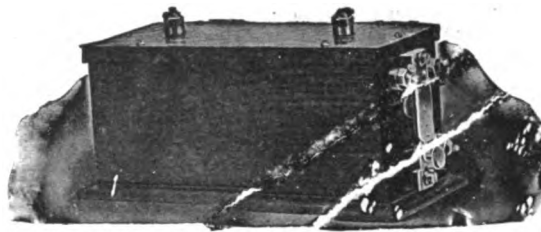


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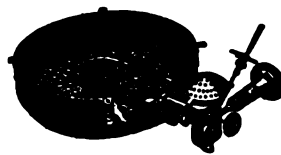
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There are times when misfiring takes place at intervals and the ignition appears to be at fault, but may prove to be that owing to the overheating of the exhaust valve it has become distorted, pitted on its seat, or the stem is slightly seizing in its guide. The symptoms are very similar. In the first place it will require carefully truing up in a light lathe, care being taken to preserve the correct angle of the valve seating, and to keep it absolutely true and straight with the stem, the slightest eccentricity of one with the other being fatal to the running of the motor. If pitted badly it will also require turning in the lathe and grinding in afterwards, or if slightly pitted grinding-in only will suffice, fine flour of emery and common lubricating oil only being required. To cure the sticking stem, smoothen it up with fine emery cloth to slightly reduce the diameter and remove the roughness, oil slightly, and replace after grinding in the seat. If the valve stem become slightly bent in any way it is sure to stick. It is better to put in a new true valve at once, if the old one cannot be made perfectly true.

Damage Done by Protruding Rivets.

The usual method employed to fix the leather to the metal centre of a clutch is to rivet it up by means of a number of copper rivets whose heads are countersunk into the leather. If the rivet heads are not knocked in lower than the outer surface of the leather, then, when the clutch is let in, these grip fiercely on the metal outer clutch surface, and thus prevent the clutch working smoothly and gradually getting up way on the car. Some difficulty may also be experienced in taking out the clutch, owing to seizing of the copper rivet heads onto the metal clutch. As it is rather difficult to obtain leather suitable for clutch work of any greater uniform thickness than one-quarter inch, and some of this must be turned off in truing up the leather after riveting, there does not remain more than an effective depth of one-eighth inch of leather held by the rivet head, and this should be one-sixteenth inch below the leather outer surface to allow for wear and compression.

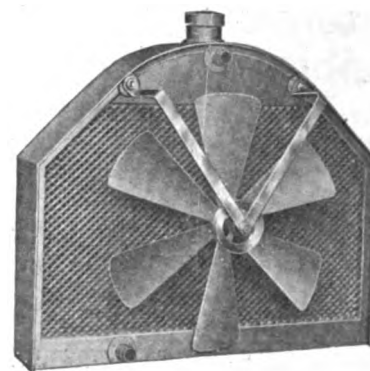
Overalls for the Working Owner.

The motorist who is fond of looking after things about his car himself will find that there is no better protection for his clothes than a complete set of overalls. The material of such a suit is cotton, and it can be washed when soiled. Overalls consist of coat and trousers, the latter being held in position by braces or belt.

A boiler suit in one piece is even more handy for doing extensive investigation or repair work where there is a lot of dust and dirt. The suit is usually provided with a draw string at the bottom of the legs and sleeves, which can be pulled tight when being worn. A boiler suit is also fitted with a hood to go over the head and protect the hair. The cost is usually a little more than the overalls, but it is well worth the extra outlay.

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Cincinnati, Chicago, St. Louis, Boston



MILLER OIL GUN.

This oil gun or syringe should be part of the equipment of
every automobile. It will handle light and heavy oils and is
intended for oiling transmissions, gear boxes and inaccessible
places. By its use 50 per cent of the oil now wasted can be
saved. Furnished in polished brass. Diameter of barrel 1 in.
Total length 13 1/4 in. Guaranteed.

Price, \$1.00 each; \$10.00 per dozen.

SPECIAL PRICES TO MANUFACTURERS AND JOBBERS

Catalog mailed upon request.

The Largest Automobile Supply House in America.

CHARLES E. MILLER,
97-99-101 READE ST., NEW YORK CITY
Retail Branch: 38th St. and Broadway.



Springfield Top
PATENTS PENDING.

Aluminum Bodies
Aluminum Fenders
Aluminum Hoods.

**Springfield Metal
Body Co.,**
Springfield, Mass.

RADIATORS,

TANKS,
MUFFLERS,
FENDERS,
HOODS.

BRISQEE MFG. CO., - Detroit.



Made at the SPLITDORF LABORATORY.
Established 1868.
G. F. SPLITDORF, 17 Vandewater St., N. Y.

HIGH-GRADE LAMPS

Acetylene Gas and Oil

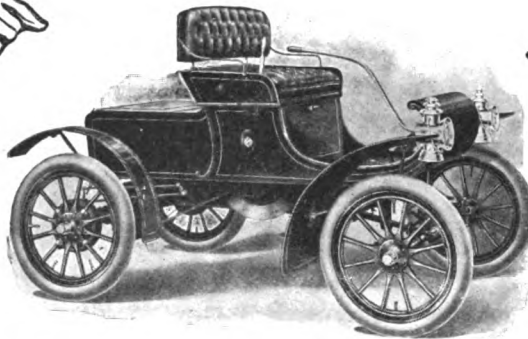
ATWOOD MFG. CO.,
Amesbury, Mass.



"Jack, what is C H & D, a new breakfast food?"
"No, it's a Railroad from Cincinnati to Chicago." Speaking of food,
I got the best meal on their cars I ever had on a railroad."

OLDSMOBILE

With familiar curved front and general appearance unchanged, our Standard Run-about embodies all the advanced ideas and demonstrated practical principles of automobile construction. The seat is four inches wider,



and the outlines of the machine are somewhat heavier. Motor equipment, 5-6 inches 7 H. P. horizontal transmission all spur gear, two speeds forward and one reverse controlled by the same lever. Hub brakes controlled by foot lever. These are only a few points; there are many others.

DISTINCT AND SPECIAL FEATURES OF OUR LIGHT TONNEAU CARS:

Bodies easily removed, tilting steering post, absence of all gaskets, cylinders and cylinder heads cast integral, main bearings self-oiling. Safety device which retards compression and prevents "back fire." Honey-combed radiator, divided front seat, machinery accessible without disturbing passengers in tonneau. All seats uniformly



easy riding; comfort as well as durability being characteristic of our cars.

Our immense factory facilities—nearly a million square feet of floor space—enable us to make prompt deliveries in Oldsmobile Standard Runabouts and Light Touring Cars.

For full particulars address

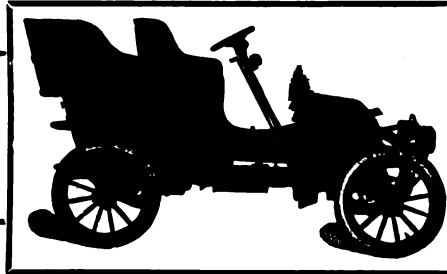
OLDS MOTOR WORKS, 1332 Jefferson Avenue, Detroit, U. S. A.

Member of the Association of Licensed Automobile Manufacturers.

The Crestmobile **BEGINS** Where Others Stop

That this is not idle talk a short examination will prove to you. The Crestmobile has more power, will run more days in the year, is more simple to run, more comfortable to ride in than any other car at a similar price. Our records show it. This result is not the work of one season, but is attained by years of experience. The air-cooling and shaft-drive are thoroughly perfected.

\$800.00
For Two Persons.



\$900.00
For Four Persons.

The easy control, handsome appearance, and simplicity of the Crestmobile surpass anything before sold. Crest air-cooling cools absolutely, and the shaft drive is another of the advanced features not found on other cars.

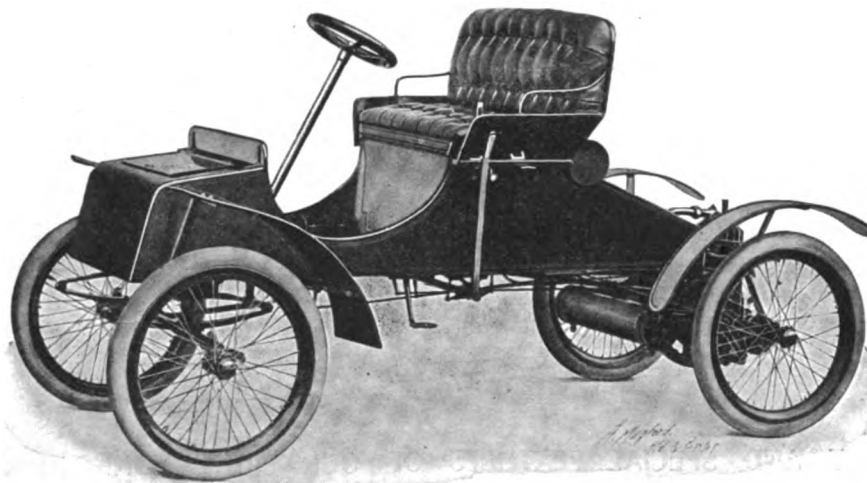
Dept. K. will send you full information.

CREST MFG. CO., - - Cambridge, Mass.

Member Association Licensed Automobile Manufacturers.

THE ORIENT RUNABOUT

JUST OUT



PRICE \$475

BODY FINISHED DARK GREEN, GOLD STRIPED.

The Slickest Little Machine on the Market. Speed, Simplicity and Economy.

ORDERS WILL BE ENTERED FROM THIS DATE. SHIPMENTS WILL BEGIN AUGUST 1st.

WRITE FOR CATALOGUE.

WALTHAM MFG. CO. - - WALTHAM, MASS.

THE CADILLAC IS ALL GOLD!

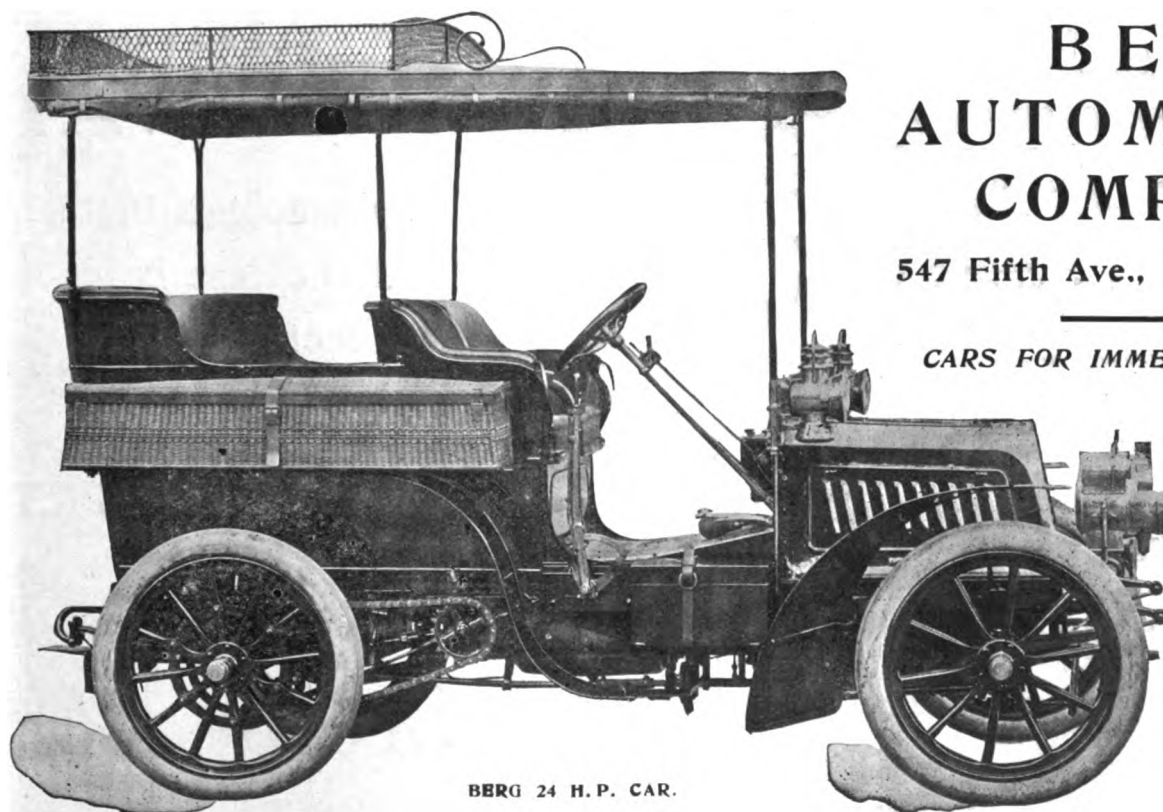
With the least power and the lowest cost the
REGULAR STOCK CADILLAC

driven by Mr. Lamont carried four people with their heavy photographic outfits through the severe two days White Mountains Endurance Test without ever a hitch and

WON THE GOLD MEDAL.

If you want to be among the winners drive a CADILLAC.

THE CADILLAC AUTOMOBILE CO., Detroit, Mich.



BERG 24 H.P. CAR.

**BERG
 AUTOMOBILE
 COMPANY,**

547 Fifth Ave., New York City.

CARS FOR IMMEDIATE DELIVERY.

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 521 Wabash Avenue.

DETROIT
 W. A. RUSSELL & CO.,
 248 Jefferson Avenue.

BINGHAMTON:
 STIRLING MOTOR CAR
 COMPANY,
 184 Water St.

Members of the Association of Licensed Automobile Manufacturers.

Its Nice to Know
How Far You Go."
VEEDER ODOMETERS.



**AT THE SEASHORE A
KNOX WATERLESS GASOLINE CAR**

Is always *en regle*—style, luxuriousness and durability make it so.
Its beauty of proportions gives added charm to its reliability.—
Best by Road Test.
Has the Only High Power Engine Successfully Cooled by Air—
By the Knox Patent System of Automatic Air Cooling.
What others attempt to do the Knox does.
6 Styles Tonneaus, Surreys and Runabouts,
6 Styles Commercial Cars.
Send for Beautiful Catalogue.
KNOX AUTOMOBILE CO.,
Springfield, Mass.
— Members Ass'n Licensed
Automobile Manufacturers.

Selling Agencies
in all
Principal Cities.

"TUXEDO"
Two-Cylinder
Touring Car.

THE ONLY WAY

to build automobiles that
will stand the test is to
use sheet metal parts in
place of castings.

**WE DO HEAVY AND DIFFICULT
STAMPING.**

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BUFFALO, N. Y.

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The following Manufacturers and Importers are licensed under the pioneer patent Number 549,160, granted to George B. Selden, dated November 5th, 1895, on

Gasolene Automobiles.

In view of their license agreement they and their agents will not sell, keep on hand or in any manner dispose of or deal in directly or indirectly any unlicensed new or second-hand gasolene vehicles, infringing said Selden patent.

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Electric Vehicle Co.
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Standard Automobile Co.
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Sidney B. Bowman Automobile Co.

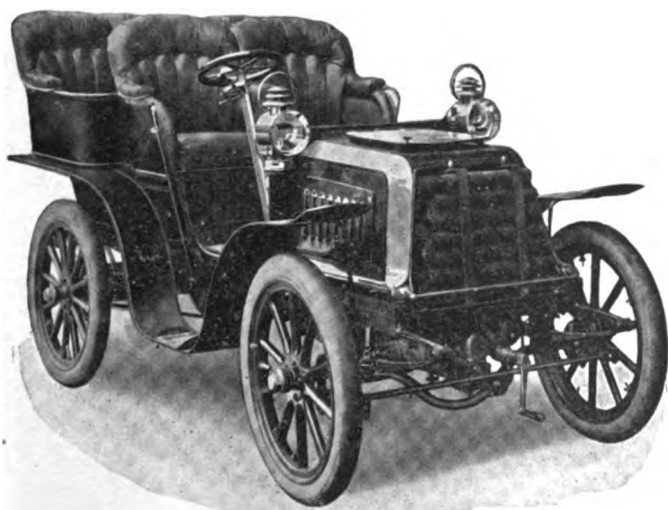
Auto Import Co.
F. A. LaRoche Co.

Both the basic Selden patent and more than 400 other patents owned by members of this Association will be enforced against infringers. Manufacturers, Importers, Dealers and Agents, also Users of unlicensed machines are liable.

ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS, - 7 East 42d Street, New York.

== 1053 3-5 MILES == WITHOUT STOPPING THE ENGINE THE DARRACQ DID IT

The Darracq now holds all World's record for a phenomenal non-stop run during three days between New York and Boston



Mr. F. A. La Roche and Mr. A. J. Picard drove a 15-20 H. P. Darracq continuously over the New York-Boston route four times, starting Sunday, 6 p. m., June 26, and finishing at 1.15 p. m., June 29, a total distance of 1,053 3-5 miles, and THE ENGINE NEVER STOPPED. The Darracq surpassed all former records by twenty-four miles. The Darracq is the first car to successfully accomplish this test of quality, reliability and power, and the first car to run continuously 1,000 miles and over in America, although the feat has been attempted several times by others.

THE AMERICAN DARRACQ AUTOMOBILE COMPANY NEW YORK

Controlled by the F. A. LA ROCHE CO.

Licensed Under The Selden Patent

652 Hudson St. Tel. 776 Chelsea 147 W. 38th St. Tel. 5501 38th
PHILADELPHIA BRANCH: 317-319 NORTH BROAD ST.

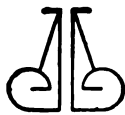
AGENCIES: Chicago: Ralph Temple Automobile Co.
Detroit: W. A. Russell & Co.



Morgan & Wright Clincher Tires

are made a little stronger than is necessary for even the hardest roads.

LOOKS LIKE A GOOD TIRE, AND IS BETTER THAN IT LOOKS



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

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THE PIONEER TIRE

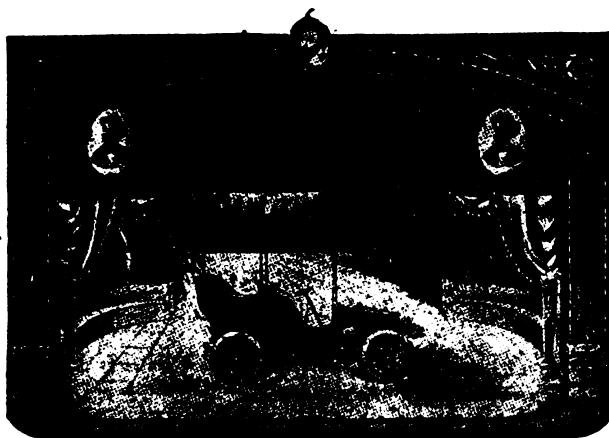
Experience counts in the making of automobile tires. We have been making G & J Clincher Tires for ten years, and know how to make tires that will give the best service. Use the genuine G & J tires and get the benefit of this experience. They are high grade, reliable tires.



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

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Main Office and Factory:
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Sprague's Patent Canopies
With Roller Celluloid or Glass Front.
PRICE, \$100.



We also make a line of fine canopies, natural veneer tops, elegant in finish. Write for prices.



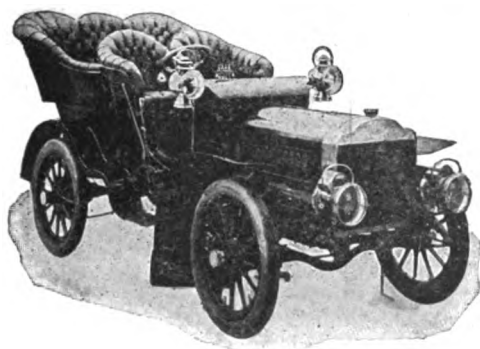
Mr. Owner,
ask
Mr. Dealer
to order
Mr. Manufacturer

to furnish your Automobile equipped with

POLISHED BRASS RAILS

Or, if you have your machine now, have your DEALER
ORDER RAILS DIRECT from the manufacturer.

JOS. N. SMITH & CO.,
33 West Larned St., Detroit, Mich.



3-Cylinder

"THERE'S LUCK IN ODD NUMBERS"

but there is more than luck in the

Thomas Touring Car

There is scientific design—perfect balance—reduction of both complication and liability of trouble—speed—power—all those things that go to make up the satisfactory car.

If that's the sort of car you seek, we can interest you.

E. R. THOMAS MOTOR COMPANY, (Members of the Association of Licensed Automobile Manufacturers,) 1210 Niagara St., Buffalo, N. Y., U. S. A.

TRY US FOR PRESSED STEEL FRAMES.

We are making them from the Highest Grade of Cold Rolled Steel under the most perfect conditions of manufacture.

Latest types of Hydraulic Presses and Riveters, give us unsurpassed facilities for making pressed steel frames in large quantities. Where accuracy and quality are considered we guarantee satisfaction.

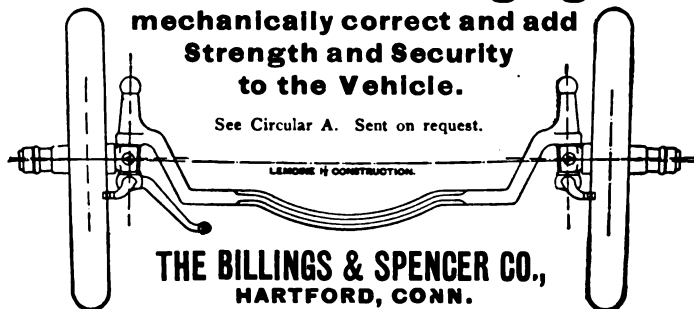
NOW IS THE TIME TO CONSIDER 1905 REQUIREMENTS.

Send us your drawings and get our prices.

CLEVELAND CAR SPECIALTY CO.,
CASE AVENUE and LAKE STREET, CLEVELAND, OHIO

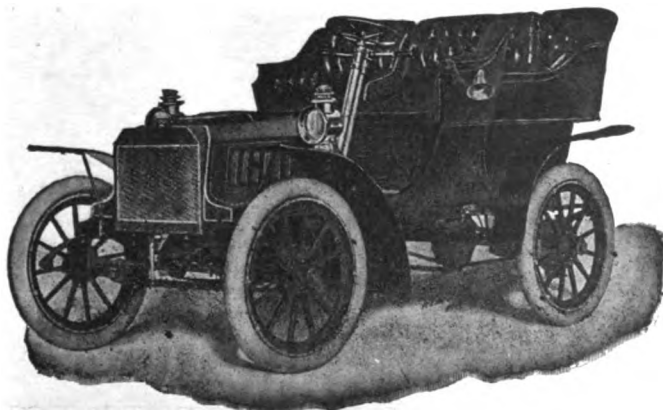
These **Front Axle Forgings** are
mechanically correct and add
Strength and Security
to the Vehicle.

See Circular A. Sent on request.



THE BILLINGS & SPENCER CO.,
HARTFORD, CONN.

Makers of
Automobile Forgings of Every Description.



FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — **\$1,700** at the factory.

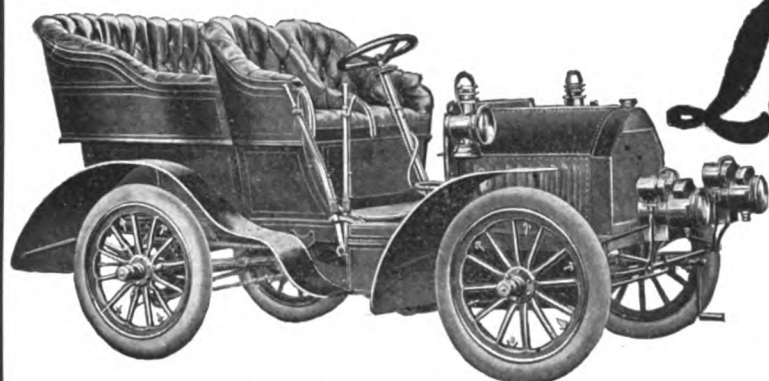
Two cylinder, horizontal, opposed motor in front.
Ball bearing transmission gear.
Wheel or lever steerer.
Divided front seat.

Automatic oiling of engine and other parts.
Gear drive.
Every part instantly accessible.

THE AUTOCAR COMPANY,
Ardmore, Pa.

BOOKLET.

Member of the Association of Licensed Automobile Manufacturers.



Type C. \$2100 complete.

Locomobile GASOLENE TOURING CAR.

HAVE YOU BEEN DISAPPOINTED IN GETTING DELIVERY OF SOME OTHER MAKE?

If so, Communicate with us.

"EASILY THE BEST BUILT CAR IN AMERICA."

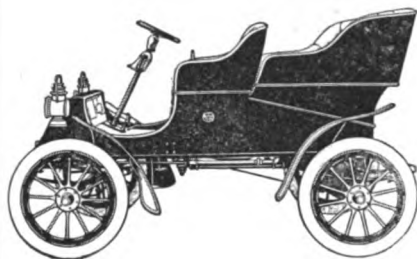
PRICES, \$2100 upwards.

The *Locomobile* Company of America, Bridgeport, Conn.

BRANCHES

NEW YORK, 76th St. and Broadway. CHICAGO, 1354 Michigan Ave.
PHILADELPHIA, 249 North Broad St. BOSTON, 15 Berkeley St.
Member Association of Licensed Automobile Manufacturers.

THE FORD



Write for catalogue and full particulars to

FORD MOTOR CO., Detroit, Mich.

is an automobile with a reputation. We have proven our ability to make and sell for \$900 a car equal to any machine costing less than \$2,000.

What is more, THE FORD has stood the test of time and hard usage. The double opposed motor is the same type of engine used in the most expensive touring cars.

FOR THE PHYSICIAN and Business Man the reliability of the FORD is its strongest recommendation.

Its simple construction enables any member of the family to easily master the mechanism and to readily learn to operate it.

THE TRIUMPH OF THE ELMORE PATHFINDER



OVER 1000 MILES OF ROADS OF ALL SORTS IN ALL KINDS OF WEATHER AND A REPAIR BILL OF 25 CENTS.

Did any car of any size ever equal this record? This car made a mapping and routing tour from New York to St. Louis during weather conditions that delayed traffic, and its business was to investigate every road, find the bad places. A severer road test could not be made.

The lesson to be learned from this trip is that a small car costing \$850 that can accomplish these things is worth further investigation. Let us send you our book, "One Long Jump and Two Short Steps," and our new catalogue.

THE ELMORE MFG. COMPANY,

1104 AMANDA ST., CLYDE, OHIO.

Members of the Association of Licensed Automobile Manufacturers.

"The A.B.C. of Electricity"

will help you understand many things about motors which may now seem hard of understanding.

108 Pages. 50 Cents Per Copy.

THE GOODMAN COMPANY,

94 TRIBUNE BUILDING, NEW YORK

The YALE TOURING CAR \$1500.00

The Yale is a beautifully finished, roomy, luxurious family car at a moderate price. It is a happy medium between the ponderous "all motor" racing car and the noisy but inefficient run-about. It will do all the work asked of it, do it easily and is dependable. A comparison of the Yale with the other cars exhibited at the National Shows goes to show that in the Yale you can offer more for the money than in any other car made.

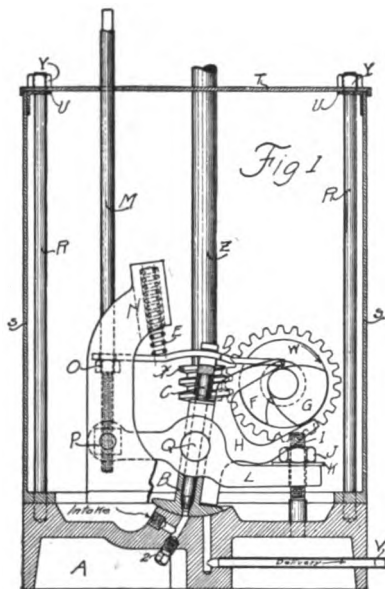
Send for catalogue and at the first opportunity examine a Yale.

THE KIRK MFG. COMPANY, 950 Oakwood Ave., Toledo, Ohio.

Members of the Association of Licensed Automobile Manufacturers.



THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

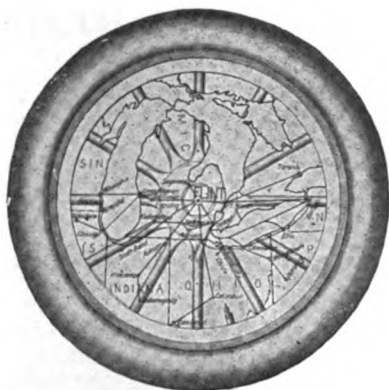
THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.

IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours.
CHICAGO 24 hours.



Baltimore 5 days.
New York 4 days.
BOSTON 5 days.

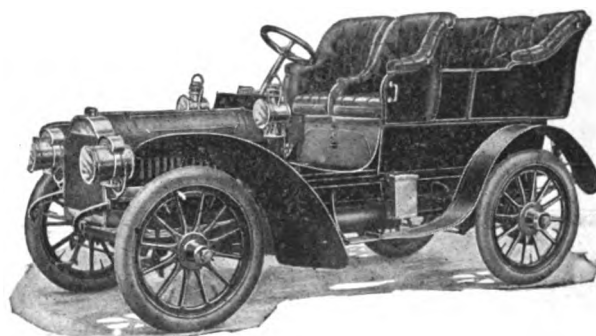
**We are supplying the largest
Manufacturers—WHY?**

THEY GET THE WHEELS.

IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.

Peerless

THE CAR
OF
ACHIEVEMENT



**650 Miles without stopping the
engine, attested by impartial
observers.**

Starting at 3.23 A. M., July 12th, C. G. Wridgway drove his 24 H. P. Peerless from New York to Boston and return and then on to Springfield—650 miles—without stopping the engine. A short stop was then necessary to remove a piece of waste which had become lodged in the carbureter.

**A New Record for the double
round trip between New York
and Boston.**

Continuing his trip, Mr. Wridgway traveled on to Boston and back to New York arriving there at 9.08 P. M. Thursday in the elapsed time of 65 3/4 hours, a new record for the double round trip.

**"Climb to the Clouds" in 29
Minutes 6 4-5 Seconds.**

A. E. Morrison drove his 24 H. P. Peerless up Mt. Washington July 12th. in the time above noted, establishing a record for an American gasoline Car.

THE
PEERLESS MOTOR CAR CO.
CLEVELAND, OHIO

Member Association Licensed Automobile Manufacturers.

Extract from the MOTOR AGE of June 11th, 1904:

"Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class."

This was a stock

Rambler

the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue "W" fully describes all models, and our booklet "A Little History" gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

THOMAS B. JEFFERY & COMPANY,

KENOSHA, WISCONSIN.

BRANCH HOUSES: { **Chicago, 302-304 Wabash Avenue.**
Boston, 145 Columbus Avenue.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, July 21, 1904.

No. 17

GUNNING FOR GOODNOW

**Confiding Would-Be Motorists Sent Him Money
but Got No Automobiles for it.**

Intending purchasers of automobiles from Vermont to Kansas are seeking the "R. J. Goodnow, Co., Ltd.," of Montreal, Canada, and, incidentally, regretting their unjustifiable confidence in that departed concern. The latter advertised automobiles at unheard of prices; all that was necessary to procure one was to forward \$30 or \$40 and the machine would be sent on for inspection. The money was sent in many cases, but, of course, the automobiles never materialized.

The R. J. Goodnow Co., Ltd., until a few weeks ago, occupied an office on the fourth floor of the Temple Building, Montreal, and was supposed to be engaged in selling automobiles. It appears, from the different letters, some of which have been received by mercantile agencies, and others at detective headquarters, that the firm had been advertising in several newspapers in the United States to sell automobiles at a sacrifice. Many who were anxious to purchase a good machine at a low price answered the advertisements, and received answers to the effect that they could purchase the machines on practically their own terms. The only thing necessary for the intending purchaser to do was to send \$30 or \$40 to the firm in Montreal to pay the freight on the machines to the homes of the purchasers. This was done in many cases, and it is known that in one case at least the firm sent a receipt in acknowledgment to the party who had sent the money to pay freight. It is not known, however, that the firm ever shipped an automobile or ever had a machine in their possession.

Inquiry made at the office in the Temple Building, where the firm was supposed to have been located, elicited the information that a man who gave his name as R. J. Goodnow had rented desk room there about six weeks ago, paying his rent in advance. He left on June 26, saying that he was going to Quebec and would return in a few days, but no person in the building has seen him since. He received a large quantity of mail

each day, and spent the most of his time in the office. Some person in the office drew his attention to the name "R. J. Goodnow Co., Ltd.," on his letterheads one day, and asked him if the firm had been registered. When he acknowledged that it had not, he was informed that he had better have it registered to avoid trouble, but it did not seem to worry him.

Hartford Officers and Directors Re-elected.

At the annual meeting of the stockholders of the Hartford Rubber Works Company, held on Monday in Hartford, the following were re-elected directors: Charles H. Dale, New York; William Seward, jr., Hartford; J. D. Anderson, New York; Charles A. Hunter, New York; J. W. Gibson, Hartford; H. Keene, New York; Ernest Hopkinson, New York.

At the meeting of the directors which followed the following officers were re-elected: President, Charles H. Dale; vice-presidents, William Seward, jr., J. D. Anderson and Charles A. Hunter; secretary and treasurer, J. W. Gilson. In addition to the meeting, the annual gathering and conference of the company's branch managers and travellers occurred this week.

Detroit Show Dates Changed.

One change of show dates from the list announced by the N. A. A. M. a couple of weeks ago has been made. Detroit is the city to make the change, it having been decided to follow the Chicago show, which closes on February 11, and it has therefore selected February 13 to 18, inclusive, instead of February 20 to 25, as previously chosen. The show will, as heretofore, be held by the Tri-State Automobile and Sporting Goods Association.

H. O. Smith Back From France.

H. O. Smith, president of the G. and J. Tire Company, returned from abroad last week. He spent practically all of his time in France.

Napier to Open Boston Office.

The Napier Motor Car Co. of America is to open an office and showroom at No. 743 Boylston street, Boston, Mass., about August 1.

TONNEAU AT \$525

**Waltham Company Brings Out a Touring Car
at this Price—Also a Runabout at \$475.**

Following the announcement by the Waltham Mfg. Co. that it has brought out an Orient runabout, comes a similar one of a most sensational character by the same concern. This is to the effect that they will place on the market an Orient tonneau car to list at \$525. This car, which will seat four persons comfortably, is far and away the lowest priced touring car yet marketed. It will easily carry a full load up all ordinary grades, and will be capable of a speed of 18 to 20 miles an hour on the road.

The Orient runabout, the other addition to the Orient family, is priced at \$475. It is a simple, economical and speedy machine, having wheel steering, four full elliptical springs and a bonnetted front effect. The motor is vertical, and is mounted on the rear axle. The long wheel base and system of springing make a most comfortable riding little car.

Is Made Executive Representative.

J. D. Anderson, vice-president of the Hartford Rubber Works Co., has been designated manager of the company's New York branch. He succeeds Robert P. Parker. Mr. Anderson's scope, however, will be far more than that of manager of a local branch. He will be the executive representative in New York of the Hartford Rubber Works, and will have entire charge of a considerable territory—New York, Pennsylvania, Delaware, Maryland, Virginia and West Virginia.

Is Now the R. E. Hardy Co.

The Detroit Motor Works are no more. The name of the concern, which makes the well known "Sta-Rite" ignition plugs and specialties, has been changed to the R. E. Hardy Co. The latter name is deemed more appropriate, inasmuch as R. E. Hardy, president and manager, owns nine-tenths of the stock, and the concern no longer makes motors.

CORNELL ADVISES SHOOTING

New York Magistrate Says it is Justified in the Case of Speeding Automobilists.

There seems to be no limit to the frothings of the autophobe members of the bench of this city. Magistrate Cornell, who has on several occasions indulged in violent denunciations of motorists, went a long way beyond former utterances last Sunday, when he is reported as saying:

"It seems to me that a man would be perfectly justified in shooting the chauffeurs of these squawking nuisances, that shoot through the streets at a high rate of speed. I am informed by the policemen that he saw at least one cab horse run away and drag the cab up on the sidewalk, owing to this machine's infernal noise. What do you suppose that cabman thought when his horse bolted? Do you suppose he had any sympathy with the haste of the chauffeur? Down on my country place on Long Island we hate automobiles; at least, all drivers do. I am not going to accept an owner's bond in this case, but a real estate bond, and I am going to inquire closely into that."

This inflammatory utterance, which is, of course, a pretty direct incitement to crime, was delivered from the bench, where the august magistrate was acting as interpreter for justice and trying the case of a motorist accused of speeding.

"Josling" Magistrate Cornell.

Two New York importers of French automobiles, C. R. Mabley and E. S. Partridge, conceived the idea of turning ridicule upon the remarks made by Magistrate Cornell on Sunday, advising that speeding automobiles be shot. They rigged out two negro chauffeurs in theatrical armor and, each in a separate car, sent them to parade the streets and to call on Magistrate Cornell at his court. Going through Christie street the armored knights were stoned by boys, and when they got to the court the magistrate had gone. The object was partly accomplished, however, for the cars attracted the attention of thousands, and on their sides were signs reading:

"Friends of Magistrate Cornell Please Do Not Shoot."

Incendiary Utterances Bear Fruit.

Magistrate Cornell's advice to shoot automobilists is bearing fruit. On Tuesday A. J. Picard, of the F. A. La Roche Co., was driving a car slowly through West Thirty-first street, when a group of idle men on the sidewalk started the cry, "Shoot the — — —!" It was responded to by a lot of boys, who began to throw stones at the automobilist, and he put on full speed and got away.

New Castle, Pa., hopes to capture an automobile factory. Its Chamber of Commerce is negotiating with an unnamed Buffalo concern for its removal to the Pennsylvania town.

The Week's Incorporations.

Plainfield, N. J.—The Plainfield Auto Garage, under New Jersey laws, with \$25,000 capital. Incorporators—Andrew Wilson, Joseph B. Longhead and Elizabeth Longhead.

Plainfield, N. J.—The Hyne Motor Co., under New-Jersey laws, with \$25,000 capital. Incorporators—Harrison Coddington, William B. Harsel, Charles F. Fulmer and Charles F. Hyne.

Cleveland, Ohio.—The Citizens' Auto Transit Co., under Ohio laws, with \$600,000 capital; to operate a passenger automobile line. Incorporators—H. H. McKeelhan, W. C. Merrick, W. B. Stewart, G. W. Cottrell and Julian W. Tyler.

Jersey City, N. J.—The Cook Kerosene Carburettor Co., under New Jersey laws, with \$200,000 capital. Incorporators—James J. Cook, Mungo J. Currie, John A. Currie, Samuel G. Currie, Eugene L. Flandreau, Albert J. Cook and Henry M. Traphagen.

Motor Bicycles for New York Police.

The New York Police Department is up betimes. It is "trying out" the motor bicycle, and there is every prospect that at least ten men will shortly be mounted on those speedy little vehicles. Two bicycle policemen have been using them experimentally for two weeks, and their delight surpasses all bounds. The idea is to have them patrol the city avenues and driveways most frequented by automobilists. The chief stumbling block to the formal adoption of motor bicycles is the lack of an appropriation for their purchase, but it is believed that sufficient funds will be rendered available for the immediate purchase of at least three machines.

Glidden Gives \$2,000 Endurance Cup.

At Mount Washington last Wednesday Charles J. Glidden, the inveterate tourist, announced that he would donate to the American Automobile Association a \$2,000 cup, to be a trophy for an endurance contest. His idea is to have the distance one thousand miles and have the cars run one hundred miles a day for ten days over a course selected, with an object of making the test an arduous one. The matter is now in the hands of the touring committee of the A. A. A., but cannot be said to be receiving consideration just at present, because of the St. Louis run claiming all attention. It is understood, however, that the offer will be accepted, and that the formal announcement of this fact, together with further details of the contest, will be made at St. Louis on August 11.

Wagon Maker Turns to Autos.

Manager Gordon McGregor of the Walkerville Wagon Co., Walkerville, Ont., is fathering a scheme to organize a company for the manufacture of automobiles.

Hall's automobile establishment at Waterloo, Iowa, was visited by fire last week. The damage is estimated at \$2,000.

BEWARE FOR YOUR LIFE

Boy With Pistol and Badge Loose on Long Island "Shooting Up" Motor Cars.

A young person of Patchogue, L. I., named Sherman F. Wicks, who has acquired a deputy sheriff's badge and a pistol and been sent forth into the world to hunt the wicked automobilist, last Sunday with two companions was out making money by timing automobilists over a measured stretch of road and arresting them in Patchogue. A car containing John Foley, Oscar Kline and George Wilson came along. Deputy Sheriff Wicks called upon Foley to stop, and he did not do so. Thereupon Wicks drew his revolver and fired several shots, two of which passed through the body of the automobile and between the legs of one of its occupants. The car then was stopped. Wicks says he fired at the tires of the vehicle. The charge of exceeding the speed limit, for which offence he was fired upon, is now pending against Foley, but he has begun no action against Wicks.

Wicks seems to be quite a dangerous boy to be allowed to carry a gun. His fondness for using it was shown only a few days prior to the Foley episode, when he caught a bicyclist committing the heinous crime of riding on the cycle path without a license tag and pulled his revolver and fired a couple of shots to stop him. It must be anxious times for mothers in the region where Wicks roams, for children who play jackstones and marbles on the property of others violate trespass laws and may be murdered for it.

Windsor White's British Souvenir.

When in England he tried to do as Americans do, and in consequence Windsor T. White, of Cleveland, president of the National Association of Automobile Manufacturers, is bringing home with him an interesting but expensive souvenir of the way the law against motor vehicles is enforced in England. While in London he drove on the right hand side of a "refuge," was spotted by a "bobby," who took the number of his nice new British license tag, and later he was fined forty shillings and two shillings costs. The fact that he was fined was indorsed on his license, and now enhances its value as a souvenir.

Dayton Takes Over Climax Plugs.

The Dayton (Ohio) Electrical Mfg. Co. is now marketing the entire output of the Climax Igniter Co.'s plugs; they are styling the improved plug the "Magnetic," and have increased the price from \$7.50 to \$10.

J. E. Crater, of the Motor Car Co., Newark, N. J., has opened a branch store at No. 1,038 Bangs avenue, Asbury Park, N. J.

READY FOR LONG RIDE

More than Fifty Entered for St. Louis Tour and Others Pledged—Details.

Everything in the way of arrangements was well in hand this week for the general tour to St. Louis under the auspices of the American Automobile Association. Chairman Augustus Post of the tour committee, Secretary C. H. Gillette and Press Agent A. B. Tucker were as busy as flywheels all the week keeping the machinery moving and attending to the last details, which consisted largely in concluding arrangements with hotels and garages, getting route cards, badges and numbers ready, and, not least, answering questions.

On Wednesday there were fifty-one bona fide and paid up entries in hand, of whom ten were to start from New York and proceed along the main line route, which is that by way of Albany, Buffalo, Cleveland and Chicago.

It has been planned by the committee to ask the tourists from each city to start in a body and to have as big an escort as possible go with them for thirty or fifty miles. By doing this it is calculated that greater interest and enthusiasm will be aroused, and some of those now hesitating will be induced to join the caravan.

The New York contingent is scheduled to start at 9 o'clock next Monday morning from the Central Park Plaza, near the Automobile Club of America, Fifty-eighth street and Fifth avenue. As many A. C. A. members as possible are to act as an escort as far as Peekskill or Poughkeepsie.

The New England division will start next Monday and go by way of Worcester, Springfield and Pittsfield to Albany, where it will join the New York division on the main line.

The Philadelphia and Pittsburg division will not start until Wednesday, and, going by way of Reading, Harrisburg, Gettysburg, Pittsburg and Youngstown, will join the main line forces at Cleveland. Those going from Baltimore will start on Wednesday and join the Philadelphians at Gettysburg.

The central division will leave Columbus, Ohio, on Friday, August 5, and proceed by way of Richmond, Indianapolis and Terre Haute to St. Louis.

Each of the participants will be furnished with a badge, and the chauffeurs with celluloid buttons similar to those used on the New York-Pittsburg endurance run, and the cars will carry numbers. For the purposes of the trip all chauffeurs and mechanics will be known as "operators," and all other participants as "tourists." The officials of the A. A. A. will be distinguished by a blue sash with gilt lettering on the arm, while the officials of the run will wear on their arms white sashes with gilt lettering.

Following is the complete list of those entered for the fray, with all the particulars concerning them:

Entry No. 1. Harlan W. Whipple, Andover, Mass., president of the American Automobile Association. From Boston to St. Louis by New England and main line routes. Chauffeur; drives Mercedes car, 20-27 horsepower; member of Automobile Club of America, Massachusetts Automobile Club and Automobile Club of New Jersey.

Entry No. 2. John Farson, 140 Dearborn street, Chicago, Ill., first vice-president of the American Automobile Association. From Chicago to St. Louis by main line. Will carry five passengers, including chauffeur; drives an Apperson car, 60 horsepower; president of the Chicago Automobile Club.

Entry No. 3. C. H. Gillette, 31 West Forty-second street, New York City, secretary American Automobile Association and secretary of touring committee. New York to St. Louis by the main line. One passenger; drives a Pope-Hartford car, 10 horsepower; member of Automobile Club of America, Automobile Club of New Jersey and Automobile Club of Philadelphia.

Entry No. 4. Windsor T. White, Rose Building, Cleveland, O., director of American Automobile Association. New York to St. Louis by the main line. Chauffeur; drives White steam touring car, 10 horsepower; president of National Association of Automobile Manufacturers and member of Cleveland Automobile Club.

Entry No. 5. Elliot C. Lee, 40 State street, Boston, Mass., director of American Automobile Association. Boston to Buffalo by New England main line routes. Chauffeur; drives a White touring car, 10 horsepower; president Massachusetts State Automobile Association and president of the Massachusetts Automobile Club.

Entry No. 6. A. R. Pardington, 81 Willoughby street, Brooklyn, N. Y., director of American Automobile Association and chairman of racing board, A. A. A. From New York to Albany by main line. Drives Franklin, 10 horsepower; member Long Island Automobile Club.

Entry No. 7. Dr. Julian A. Chase, Pawtucket, R. I., director of American Automobile Association. Pawtucket to Albany by New England route. Two passengers; Stanley steam car, 6 horsepower; president of Rhode Island Automobile Club.

Entry No. 8. Dr. W. E. Milbank, 111 State street, Albany, N. Y., director of American Automobile Association. Albany to Buffalo by main line. Two passengers; drives a Knox, 8 horsepower; president Albany Automobile Club.

Entry No. 10. Augustus Post, 31 West Forty-second street, New York City, chairman of Touring Committee, A. A. A. New York to St. Louis by main line. Chauffeur; White steam touring car; Long Island Automobile Club.

Entry No. 11. Frank X. Mudd, Fisher Building, Chicago, Ill., member of touring committee, A. A. A., and chairman of the Chicago division. Chicago to St. Louis by main line. Five passengers; chauffeur; drives an Austin, 50 horsepower; member of Chicago Automobile Club.

Entry No. 12. W. C. Temple, Farmers' Bank Building, Pittsburgh, Pa., member of touring committee of American Automobile Association, chairman Pittsburgh division. Pittsburgh to St. Louis; four passengers, including chauffeur; president Automobile Club of Pittsburgh and life member of the Automobile Club of America.

Entry No. 14. R. P. Scott, Baltimore, Md., member of touring committee, American Automobile Association, chairman of

Baltimore division. New York to St. Louis by main line route. Six passengers, including chauffeur; special Peerless, 70 horsepower; member of Automobile Club of America and member of Automobile Club of Maryland.

Entry No. 15. Charles J. Gildden, 10 P. O. Square, Boston, Mass., member of touring committee of American Automobile Association, chairman of the New England division. Boston to St. Louis by New England and main line routes. Four passengers, including chauffeur; drives a Napier, 24 horsepower; member of Automobile Club of Great Britain and Ireland, Automobile Club of America and Massachusetts Automobile Club.

Entry No. 16. William Monypeny, jr., Columbus, Ohio, member of touring committee of the American Automobile Association, chairman of the Columbus division. Columbus to St. Louis by National Highway. Four passengers, including chauffeur; drives Stearns, 24 horsepower; member of the Columbus Automobile Club.

Entry No. 17. H. W. Smith, Syracuse, N. Y., member of touring committee of American Automobile Association, chairman of the New York State division. Syracuse to St. Louis by main line route.

Entry No. 18. George S. Waite, 23 Rockwell street, Cleveland, Ohio, member of touring committee of American Automobile Association, chairman of Cleveland division. Cleveland to St. Louis by main line. White steam touring car, 10 horsepower; member of Cleveland Automobile Club.

Entry No. 19. James L. Breese, New York, member of racing board of American Automobile Association. Buffalo to St. Louis by main line route. Drives Mercedes, 40 horsepower; member of Automobile Club of America.

Entry No. 20. F. C. Donald, Tribune Building, Chicago, Ill., member of racing board of American Automobile Association. Chicago to St. Louis by main line. Four passengers, including chauffeur; drives Pope-Toledo, 24 horsepower; member of Chicago Automobile Club.

Entry No. 21. H. Frederick Lesh, 597 Atlantic avenue, Boston, Mass. Boston to St. Louis by main line. Five passengers, including chauffeur; Pope-Toledo, 24 horsepower; member Newton Automobile Club.

Entry No. 22. Thomas B. Jeffery, Kenosha, Wis. Kenosha to St. Louis by main line. Four passengers, including chauffeur; Rambler, 16 horsepower.

Entry No. 23. A. J. Wills, 210 Park street, Akron, Ohio. New York to St. Louis by main line. Four passengers, including chauffeur; member Cleveland Automobile Club.

Entry No. 24. Haynes-Apperson Company, Kokomo, Ind. New York to St. Louis by main line. Two passengers; drives Haynes-Apperson, 12 horsepower.

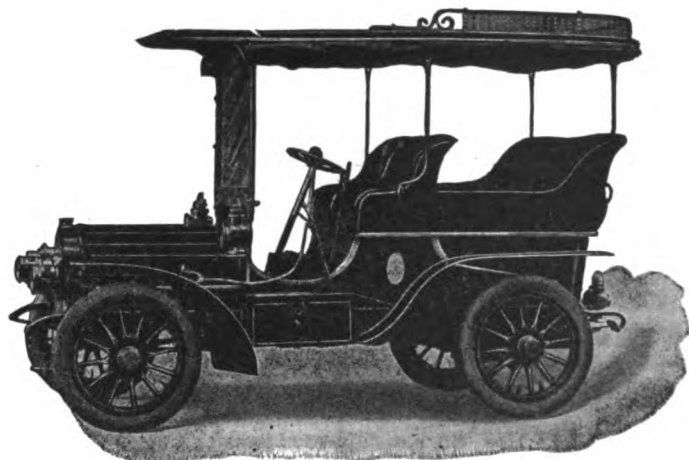
Entry No. 25. Hart D. Newman, 212 Carondelet street, New Orleans, La. Baltimore to St. Louis by National Highway. One passenger; drives White touring car; member of New Orleans Automobile Club.

Entry No. 26. Sam Stone, jr., 818 Common street, New Orleans, La. Baltimore to St. Louis by National Highway. One passenger; drives White touring car; member New Orleans Automobile Club.

Entry No. 27. Royal R. Sheldon, 761 Boylston street, Boston, Mass. Boston to St. Louis by New England main line. Chauffeur; drives De Dietrich, 30 horsepower; member Massachusetts Automobile Club.

Entry No. 28. Dr. R. E. Rolfe, 715 Boylston

(Continued on page 619.)



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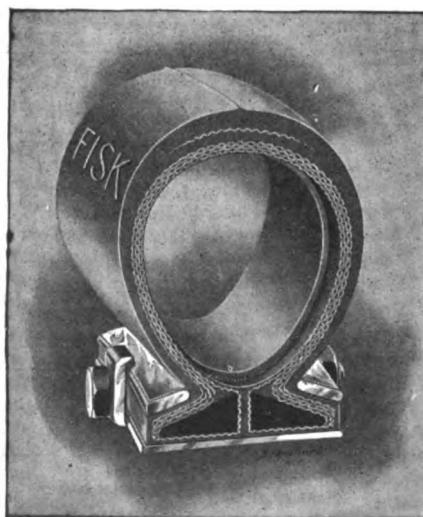
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Looking After Sold Cars.

So far the automobile trade has never had any particular trouble in making cars once sold stay sold. The usual terms of sale preclude anything of the kind. Payment is nearly always made before the purchaser has any chance to become dissatisfied, and, whether or not he subsequently repents of his bargain does not make a great amount of difference. The money is paid and the transaction closed.

But no conscientious or even shrewd maker or dealer will regard his responsibility at an end when he has been paid for a car. Its subsequent behavior is of little less importance to him than to its owner. If it fails to give satisfaction his reputation and even his business suffers. He cannot have a worse enemy than a dissatisfied customer; yet he may be wholly ignorant of both the dissatisfaction itself and its cause.

There is another unfortunate side to the

matter. The trouble may be entirely the fault of the customer. He may be incompetent, reckless or careless. But in any case the harm is done, and no small portion of the blame attaches to the maker. His only remedy is to put an end to the troubles—to turn out cars that won't go wrong, or, if this is not always possible, to follow up the troubles and eradicate them.

This is such an obvious course that one would expect it followed regularly. But it is not. Only of late has it become a policy with a few concerns to employ a "follow-up" system, with the object of seeing how their cars are doing and of removing any dissatisfaction that may exist. These concerns, whose number is steadily increasing, do the work systematically and thoroughly. Sometimes they have in their employ inspectors whose business it is to go from town to town and make a personal examination of every one of the company's cars in commission and ascertain what, if anything, is wrong with them. Other makers arrange to have this work done by their branch houses or agents. In either case the plan is to take up each car separately, get in touch with its owner, listen to his complaints or criticisms, and, having gathered all possible information about it, sift the matter to the bottom.

Frequently it is found that the complaints are groundless, or that the trouble is of the most trivial character. Again, it sometimes happens that ground for complaint exists where none is made. That is to say, the car is not developing the power it should or is not giving as good service as it could, and all the while the user is unconscious of the fact. He may be perfectly satisfied with the work of the car, and when told of the trouble manifests incredulity. When he is finally convinced he is much astonished.

These are the rare cases, however. The ones the inspectors like to get hold of are those where the motorist is dissatisfied but silent. He has complained, perhaps, but without result. Or his car has been tinkered with and left in just as bad condition as ever. Then he makes up his mind to endure what he can't cure, resolving, meanwhile, to steer clear of that particular car when he is next in the market.

But, whatever the condition of the car or the state of mind of its owner, inspectors of this kind accomplish a world of good. They show that the concern is back of its product in spirit as well as in letter, and exercises a fostering care over patrons. Wrongs are righted, and on the departure from a town of an inspector a clarified atmosphere is left

behind that means much in making the way of both maker and dealer easier.

Murder Mania.

A sworn officer of the law, a magistrate sitting on the bench in a New York court, has spoken in a way to encourage the murder of automobilists, saying that the use of shotguns is justifiable to stop them from speeding, and deputy sheriffs on Long Island have begun to "shoot up" the motor vehicles.

It is hard to realize that these are plain truths of this day, and not a story from the dark ages.

In wild, unsettled countries, after a man has committed a number of homicides, a price is put upon his head, dead or alive, and he is hunted down and most often taken dead. In civilized communities these doings are regarded with horror and as pieces of barbarism. To have an officer of justice in the same civilized community advocate the shooting of men who offend against a minor ordinance, and who commit no crime, is, however, allowed to pass after a few indignant protests have been uttered.

There is no doubt but what the utterances of Magistrate Cornell, of New York, who recommended the use of shotguns against speeding automobilists, may amount to an advocacy of murder in the minds of a certain class of hotheads. The injury done by such speeches from a court officer is incalculable. There is always a certain amount of lawlessness ready to crop out with slight encouragement, and before their effect can be counteracted the words of Justice Cornell are apt to encourage murderous attacks.

A connection between the remarks of the magistrate and the firing upon an automobile party by Deputy Sheriff Wicks at Patchogue, Long Island, cannot be established because of their occurring on the same day; but the action of the deputy is an excellent illustration of the rashness that exists and which will be kindled by the judge's remarks.

Coming at this time, when persons are beginning to be accustomed to automobiles and are losing their fear of them and some of their prejudice against them, just as most horses and donkeys have done, before most humans, the words of the magistrate are like a stream of oil upon the dying embers of a bigoted hatred.

Can nothing be done beyond lamenting such words and such acts? Is all the boasted organization and co-operation of automobilists of no avail in the face of such abuses of office? Remarks of the sort accredited to

Magistrate Cornell are so unjudicial that a man uttering them should not continue in the role of a minister of justice.

The shooting of the deputy at the automobile and the striking of the bullets against the seat, occupied by passengers was an illegal act. He says he aimed at the tires, but the lodgement of the bullets shows that a felonious assault was committed. There is no warrant whatever in law for an officer to shoot at a man who is escaping if his offence is merely a misdemeanor. The law against speed is one difficult to observe. It is broken every day by every class of vehicles that use the highway. The State legislature has provided against the very contingency that arises when a speeding automobile does not stop for an officer by compelling them to carry tags by which they can be identified and apprehended on a warrant.

In the case on Long Island the deputy sheriff was a greater malefactor under the law than the automobilists he arrested. This subject has been settled by the courts for years. Relative to the law in the premises, *The Sun*, of New York, says:

"Nowhere is it more clearly laid down than in a decision rendered as long ago as 1862 by the General Term of the Second Judicial District, in which the village of Patchogue is situated. This case can be found reported in the fifth volume of *Parker's Criminal Reports*, at page 234, under the title of *Conraddy against The People*.

"The prisoner was a police officer and had arrested the deceased without a warrant and shot at him and killed him as he was endeavoring to escape from custody. The deceased at most had been guilty of a misdemeanor, but not a felony; and upon the trial the court had charged the jury that the prisoner was not justified in shooting the deceased in order to prevent his escape. This instruction was sustained as correct in the Appellate branch of the court. The opinion was written by Mr. Justice Emott, who said: 'The distinction is marked between cases of misdemeanor and of felony. It is only in the latter that a homicide is justifiable by any person acting without a warrant, even when it is the only means to prevent the escape of the criminal.' 'When no process has been issued, a homicide can only be justified, even by an officer, by showing the actual commission of a felony and that there was a positive necessity to take life in order to arrest or detain the felon.'

"From this statement of the law it is manifest that there can be no possible justification

for the act of the deputy sheriff at Patchogue."

In the face of all this what is to be done? Should automobilists as individuals and as organized bodies remain quiescent under a situation for which outrage is too mild a word?

It would seem that some hot headedness on the part of automobilists is about justified.

Dilemma of a Dealer.

The possession by an established dealer of the agency for a popular and widely known car is a valuable asset in his business. He may with justice look upon it in the same light as, or even a stronger one than, that other elusive quality, goodwill. It possesses a certain definite value, and there have even been cases where this value was expressed in concrete figures and offered at a fixed price, the latter being paid without demur by a rival dealer desirous of obtaining possession of the agency or by a newcomer wishing to enter the field.

But circumstances sometimes arise which make an asset of this character less valuable, temporarily, at least. Through inability to obtain deliveries, or for other reasons equally cogent, there is "nothing doing" in that particular car. Naturally, the dealer pushes another line in its place, or, if he has no other line, he makes haste to procure one. In such case is he warranted in holding on to the first mentioned line, even though it may directly conflict with the one just added? From his viewpoint the answer is "yes," decidedly so.

A case of this nature came under our notice recently, and it is interesting as involving a nice point in business practices. The concern making the dealer's leader was unable to make deliveries as usual, and it was fair enough to interpose no objection to the dealer's undertaking the sale of a rival car, even although the latter conflicted directly with its own car. The dealer pushed the second car during the season and built up a good trade in it. When the season had begun to wane deliveries of the first car were ready to be made, and a few of them were taken by the dealer. It was too late, however, to effect a change of lines then, so both cars were displayed, and, as the dealer aptly put it, "left to fight it out themselves."

Now the question which perplexes all the parties concerned—the two makers and the dealer—is, what is to be done in 1905? Obviously, the dealer cannot sell both cars, or

at least he cannot do them both justice, and the logical course for him to pursue—from the makers' standpoint—is to give one of them up. But the dealer cannot see it just this way. He doesn't want to give either up; but if he must he cannot decide which he prefers to keep. He has an asset in both, having spent money in advertising them and thereby built up a good trade in them. He would prefer to keep both. If he must relinquish one, however, he cannot make up his mind which it will be. Sentimental reasons bind him to the new car. It came to his aid when he was in a tight place, and it seems a poor return to cast it off like a worn-out shoe now that it has served its purpose. Yet the other car is the older and perhaps the better seller of the two, and it is reasonably certain that the delays of this season will not be experienced again.

With the scales thus evenly balanced, it is a toss-up which course will eventually be taken. Perhaps some trifle now unforeseen will incline them one way or another.

Discharged for Being a Motorist.

How general is the belief that all motorists "have money to burn" was demonstrated anew a short time ago at Hartford, Conn. The local street railway company discharged some of its conductors, one of them because he had bought a gasoline launch, and the other because he was supposed to be the owner of an automobile. The latter vehemently denied the ownership. He said it belonged to his father, but the officials of the company received the denial with skepticism.

The incident is a curious one. A fair inference is that an employe possessing a stylish horse turnout might escape suspicion and punishment; but to go "sporting around" in a motor vehicle is sufficient to insure his being "fired" as a precautionary measure, whether he was suspected of "knocking down" or not. The injustice of the proceeding is, of course, obvious, but it is human nature.

The use of motor bicycles by the New York police will at least put an end to what appears a mild form of perjury. Hereafter it will be easier to believe the tall yarns of "cops" who nimbly overhaul automobiles moving at the rate of "forty-five miles an hour."

It is an excellent idea to have two lifting jacks, one light one to carry on the car, the other of more substantial construction to lift the wheels when cleaning.

Alfred G. Vanderbilt's Car the Feature at Empire City Meet.



Almost a race, one warranting excitement, was developed at the Empire City track, New York, last Monday, when the five-mile handicap free-for-all was run. True, it finally was won by one-third of a mile, but in the chase around the track there were moments when it was uncertain who was going to win. This was the case in the heats as well as in the final, the first heat being particularly close, and being won by only 100 yards. Although this was the nearest to real close racing seen on either of the two days which were required to complete the first programme run on the New York track this year, there was sport a-plenty furnished by the high speed in other events, which were won by nearly a mile, or more than a mile. A good-sized crowd attended on the first day, last Saturday, and the interest of the spectators was closely held by big cars running mile after mile in less than one minute each, and, altogether, the meeting scored a distinct success.

Saturday was the time originally set for the races, and a part of the programme was run off on that day; then rain interfered, and the other events were postponed until Monday.

Something like five thousand or six thousand persons were present on Saturday, and several hundred cars were parked under the grandstand and on the lawn at the rear. For

a midsummer day the number of fashionable folk on hand was astonishing. Quite a few must have returned to town from their summer homes for the day, which is evidence sufficient that automobile racing is attractive. When the races were declared postponed because of the rain, the precedent established at Boston of making the admission free on the postponed date was not followed, and yet there were two thousand or three thousand present on Monday to see the remainder of the programme run off.

On Saturday a string of records for Class 2 cars (881 to 1,432 pounds) were made in the first race by W. Gould Brokaw's Renault, driven by M. G. Bernin, and on Monday Alfred G. Vanderbilt's Mercedes, driven by Paul Sartori, established new world's records from sixteen to twenty miles, inclusive. The new records replaced the figures made by Henry Fournier in 1901 at Fort Erie. In doing these feats Sartori used up all his water, and the two front cylinders of the engine were broken irreparably, and the crank case was cracked. Beyond this and the bursting of a tire on another machine, there were no accidents.

As the Vanderbilt car lowered the record for twenty miles by 5 minutes 48 1-5 seconds, and the car will need a new engine entire, the glory of the achievement will cost him about \$1,000 for each minute he improved on the record.

The first race on Saturday was one of ten

miles, for cars weighing between 881 and 1,432 pounds (Class 2), in which five machines started. It was a rolling start, and a good one. In the turn the cars straightened out in the following order: W. G. Brokaw's Renault, driven by M. G. Bernin; Tod Sloan's Decauville, driven by Guy Vaughn; W. F. Winchester's Franklin, Walter Christie's Christie and Oscar Lewisohn's Mercedes, driven by M. J. Seymour. The Lewisohn Mercedes was not in good running order, and dropped behind the field rapidly, while the Vanderbilt Mercedes gained steadily, and won by nearly a mile from the Sloan Decauville. The winner's time constituted a new record on that track for that class of car.

It was at the races that the fact became common property that the Decauville car entered and driven by Guy Vaughn as his own was really the property of Tod Sloan, the jockey. Because of his difficulties with the Jockey Club Sloan did not want such evidence of his prosperity as the ownership of an imported touring car published. His plan of secrecy was frustrated on Monday, however, by the police, who held up the car while it was being towed to its garage on a charge of exceeding the speed limit. Sloan went to the front for his driver and admitted that the racer was his own car.

The second race on Saturday was a slow and tiresome event for stock cars, and then the fifteen-mile race for cars of Class 1 (1,432 to 2,204 pounds) was called. Owing to Ber-



PROCESSION OF CARS ENTERING THE GROUNDS.

nin having to replace a tire that was torn off in the ten-mile race, the second heat of the fifteen-mile event was called first. Only three cars out of the six entered responded to the call, and the heat was run, notwithstanding that the conditions called for three to qualify.

This heat was a runaway for the Vanderbilt car, as the ten-mile event had been for the Renault. The dashing style in which Sartori drove the car and made the turns and the fast time being scored, aroused the enthusiasm of the crowd, however, and every one was calculating that a fine race was in prospect when the Brokaw and Vanderbilt cars met in the final. The three cars got away well, Sartori making a dive for the pole and taking the lead in the first turn and gaining steadily from that on the Arents Mercedes, driven by Carl Mensel, keeping in second place and the Sloan Decauville in third place. The rain began to fall gently soon after the cars started, and it increased in volume until it was raining heavily and the cars skidding just before the finish. The Vanderbilt car won the race by seven-eighths of a mile from the Arents car, and by a mile and a quarter from the Decauville.

No sooner was the race over than the cloud overhead burst and the rain descended like a flood. A recess was declared, but at the end of half an hour, while it was still raining and the track looked like a river, the referee, A. R. Pardington, ordered a postponement until Monday declared. After this announcement was made the rain soon stopped and the track began to dry. Another aggravating thing was that when the crowd left the track they found the roads a mile away perfectly dry and dusty. It had been a strictly local shower.

An innovation by the track management deserving commendation was seen Saturday. This was the roping off of the lawn in front of the clubhouse, where formerly the cars of spectators were allowed to stand, so that no

one could get within forty feet of the track's outer rail.

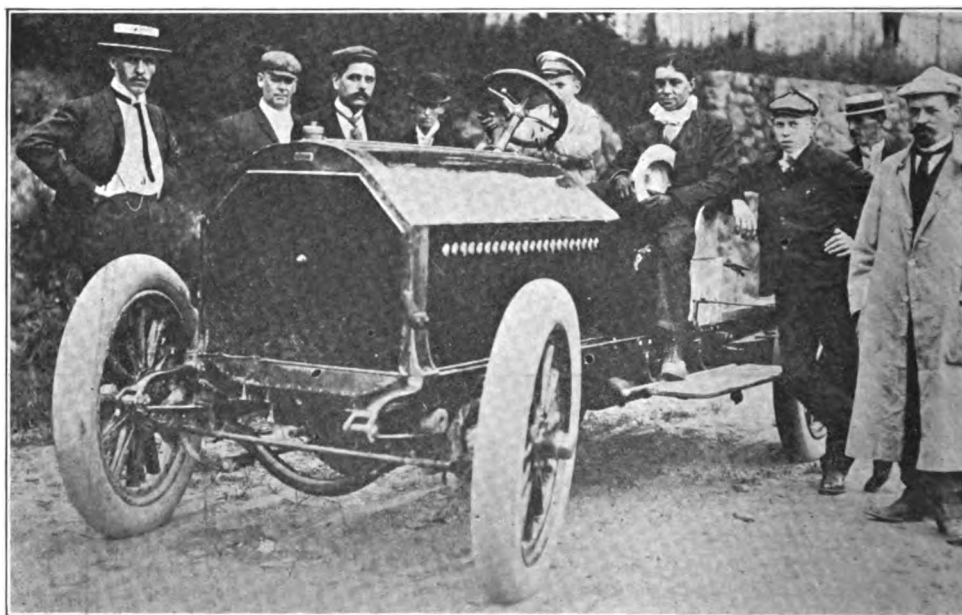
The news came out on Saturday that the new Pope-Toledo racer, which was entered for the races, was overturned by its driver, John T. Fisher, in practice on the track last Thursday and damaged, while Fisher had his ankle broken.

On Monday the track was in poor condition owing to the rain of the night before. Although the sun was shining hotly before the races began, the course was soft in spots, and all hope of new records was killed. Before the races were half over the track was so dry that the dust rolled up in clouds. As times the competitors were obscured from view, and, the element of danger being recognized, the spectators took all the keener interest in the events.

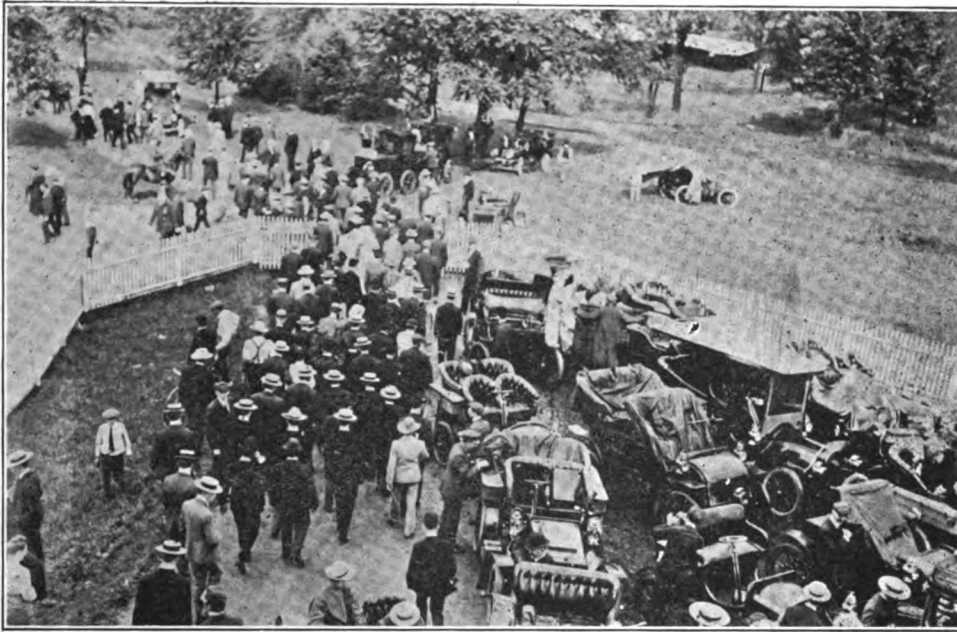
First called was the first heat of the fifteen-mile event, the second heat of which

had been run on Saturday out of its turn. As only three presented themselves to the starter, it was decided unnecessary to run the heat; the three were declared qualified for the final, and it was called. H. E. Rogers's Peerless, which qualified on Saturday, was declared withdrawn, however, and so only five started. These were the Vanderbilt Mercedes, the Brokaw Renault, the Sloan Decauville, the Arents Mercedes and the Huggins Decauville. They got away on even terms, but quickly strung out in the order named. The Vanderbilt car began to gain immediately, and the Arents Mercedes began to gain on the Sloan Decauville, while the Huggins Decauville lagged sadly. At two miles Huggins's driver, Hillyard, quit the race, leaving only four in it. In the third mile the Arents Mercedes passed the Sloan Decauville. In the eighth mile the Vanderbilt car, which from the second mile had been circling the one mile track in one or two seconds less than a minute every time, lapped the Sloan Decauville. In the same mile a rear tire on the Renault burst, but Bernin did not slack speed, and this foolhardiness created much excitement. The next time around the tire broke, and a big piece of rubber was seen to fly up in the air as the car passed the grandstand. Still Bernin did not slacken his speed. He kept going with the car bumping wildly on the rim until he had been caught and passed by both the Mercedes cars, and then, in the fourteenth mile, he abandoned the effort and took to the outer edge of the track and drove slowly to the finish.

The racing on both days showed Bernin and Sartori to be splendid drivers. They negotiated the corners in good style, but did not take them around at full speed, as Oldfield does. They would both shut off the spark for a few moments on entering the turn. But for the time lost through this manoeuvre the Vanderbilt Mercedes would



THE WALTER MONSTER OF 100 H. P. WAS A VISITOR.



THE CROWD FILING OUT AFTER SATURDAY'S DOWNPOUR.

surely have lowered the track record of 55 4-5 seconds for a mile and the world's record of 55 seconds, because the second lap in the fifteen-mile event was negotiated by Sartori in 57 seconds, while several others were run in 58 seconds, and he certainly lost five or six seconds by shutting off his spark in the turns.

The Vanderbilt car won the fifteen-mile race by seven-eighths of a mile from Arents's car, with the Sloan Decauville third by a quarter of a mile. It was seen at the end of the fifteen miles that Sartori was going fast enough to beat the old Fournier records from sixteen to twenty miles inclusive, although he had not equalled the fifteen-mile record of 14:21, made by Oldfield, and he was signalled to go on, which he did, and established the following new figures for sixteen, seventeen, eighteen, nineteen and twenty miles, respectively: 15.41 2-5, 16.39 4-5, 17.38 4-5, 18.37 1-5, 19.37 1-5.

As has been intimated, the handicap race, although it did not furnish much speed, brought about the closest finishes of the day, and was really interesting as a contest. The handicapping was done by A. L. Riker and E. T. Birdsall, the experts of the A. A. A. racing board. In the first heat six cars of various sizes started, and the heat was won by the scratch car, the Huggins Decauville, which did not catch the car in the lead, the Franklin, until within a quarter of a mile of the finish, and won out by only 100 yards. This was the best finish of the day. The second heat was won by the Brokaw Renault, which had fifteen seconds' start on the Vanderbilt, or scratch car, with A. E. Morrison's Peerless a close second. The cars in this race started from a standstill, the handicaps being allowed in time. To those in the stand and press box with stop watches it appeared that the Peerless did not get its full time allowance from the Renault, and this opinion was justified when, in the final

heat, the Peerless won the race, beating the Renault by a third of a mile.

It was in the second heat of the handicap that the Vanderbilt car was discovered to be damaged. It started, but was unequal to the task.

Summaries:

Ten miles, for machines of any motive power, from 881 to 1,432 pounds—Won by W. G. Brokaw's 30-horsepower Renault, driven by Maurice G. Bernin (time, 10m. 13 2-5s.); Guy Vaughn's 40-horsepower Decauville second (time, 11m. 11 1-5s.), and W. F. Winchester's 10-horsepower H. P. Franklin third (time, 11m. 36 1-5s.). Times at miles establishing records for class: One, 1m. 4 2-5s.; two, 2m. 4 1-5s.; three, 3m. 6 3-5s.; four, 4m. 7s.; five, 5m. 8 1-5s.; six, 6m. 8 4-5s.; seven, 7m. 7 2-5s.; eight, 8m. 9 2-5s.; nine, 9m. 11 3-5s., and ten, 10m. 13 2-5s.

Five miles, for Franklin stock cars—Won by Harry Esselstyn (time, 8m. 49 3-5s.); Alfred F. Comacho second (time, 8m. 51 1-5s.), and Charles Sineer third (time, 9m. 19s.).

Fifteen miles, free for all, for machines of any motive power, weighing from 1,432 to 2,204 pounds—Heat won by A. G. Vanderbilt's 60-horsepower Mercedes, driven by Paul Sartori (time, 14m. 40s.); George Arent, Jr.'s, 60-horsepower Mercedes second (time, 15m. 35 3-5s.), and Guy Vaughn's 40-horsepower Decauville, third (time, 16m. 57 3-5s.). Times by miles—1m. 2 4-5s., 2m. 1 2-5s., 3m. 59 4-5s., 4m. 57 3-5s., 5m. 56 4-5s., 6m. 54 4-5s., 7m. 51 1-5s., 8m. 50s., 9m. 48 3-5s., 10m. 46 1-5s., 11m. 45s., 12m. 42 3-5s., 13m. 41 3-5s., and 14m. 40s. Final heat won by A. G. Vanderbilt's Mercedes; George Arent, Jr.'s, Mercedes second; Guy Vaughn's Decauville third. Time, 14m. 44 2-5s. Times by miles, constituting local track marks—1m. 2s., 1m. 59s., 2m. 57s., 3m. 55s., 4m. 53s., 5m. 52s., 6m. 51 4-5s., 7m. 51 3-5s., 8m. 50s., 9m. 48 4-5s., 10m. 46 4-5s., 11m. 46 3-5s., 12m. 45 3-5s., 13m. 44s., 14m. 44 2-5s. The win-

ner then kept on for twenty miles, smashing track records from sixteen miles to the finish as follows: 15m. 41 2-5s., 16m. 39 4-5s., 17m. 38 4-5s., 18m. 37 1-5s. and 19m. 37 1-5s.

Empire Handicap; free-for-all; no limitations—First heat won by Nathaniel Huggins's 40-horsepower Decauville, driven by J. W. Hillard (40s.); W. F. Winchester's 10-horsepower Franklin (50s.), second; H. E. Rogers's 24-horsepower Peerless (70s.), third. Time, 6m. 2s. Second heat, won by W. G. Brokaw's 30-horsepower Renault (15s.), driven by M. G. Bernin; A. E. Morrison's 24-horsepower Peerless (1m. 10s.), second; Geo. Arent's 60-horsepower Mercedes (10s.), third. Time, 5m. Final heat won by A. E. Morrison's Peerless; W. G. Brokaw's Renault second; W. F. Winchester's Franklin third. Time—4m. 52 2-5s., 5m. 12 3-5s., 5m. 16 2-5s., respectively.

Mile record trials—Won by W. G. Brokaw's Renault, in 59s.; George Arent's Mercedes second, in 59 2-5s.

Wridgway's Luck Against Him.

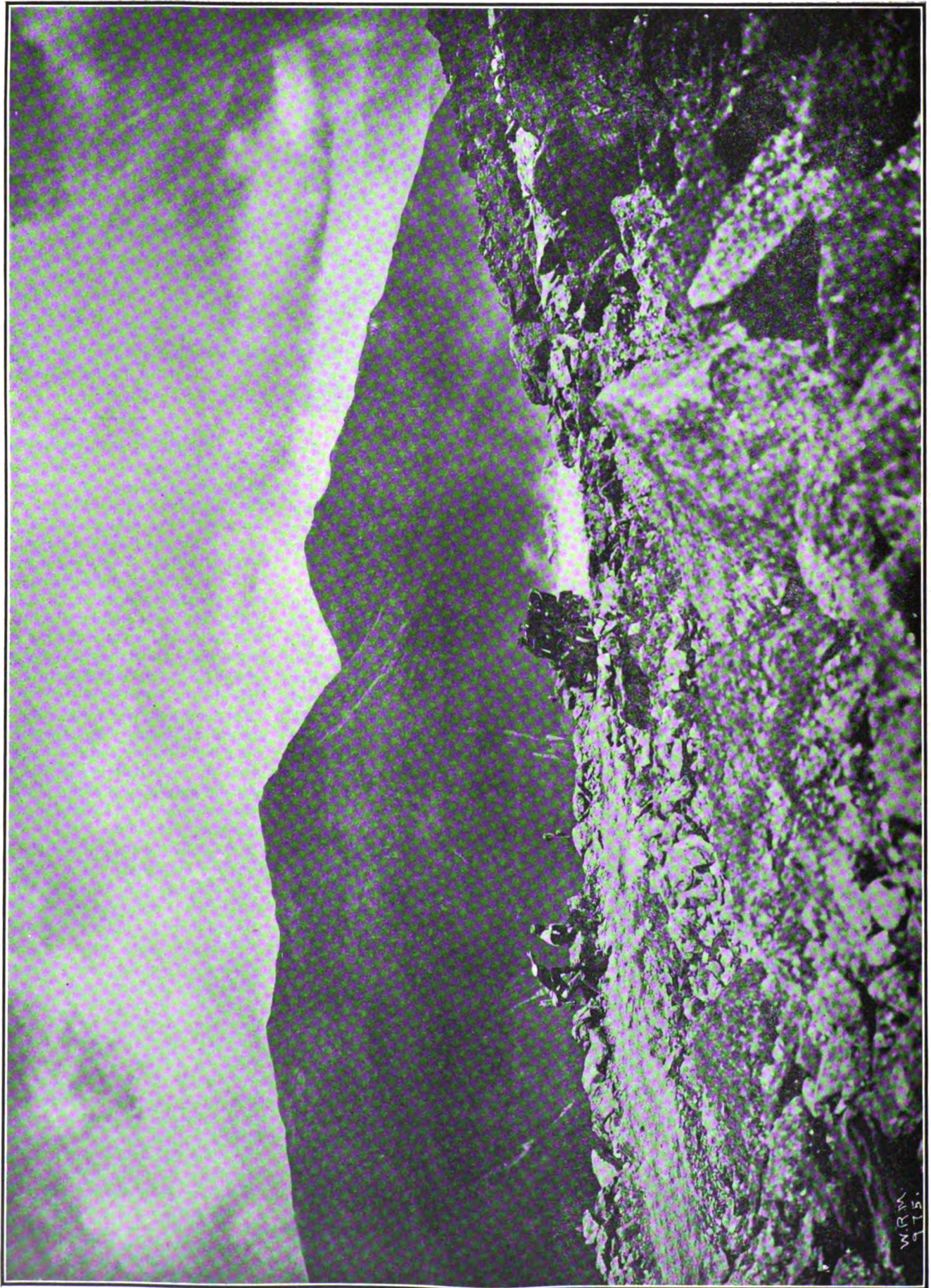
Misfortune seems to have marked C. G. Wridgway, manager of Banker Brothers' New York branch, for her own. Again he has failed after a heroic effort to establish a record for one thousand miles without the motor stopping. The trip on which he set forth on Tuesday of last week, and which was partially reported in the Motor World at the time, was continued until one thousand miles and more had been run, and in better time than the record for such a performance, but Wridgway's feat was imperfect, for the motor stopped.

The hard luck was in the form of losing a strainer and pouring gasoline into the tank unfiltered. In consequence of this a bit of waste in the carburetter accomplished what hardship in the form of sleepless nights, unspeakable roads and consequent high nervous tension could not do.

It was the third leg of the course, with the last stop at Boston. At 3 o'clock on Thursday morning word came that the car had arrived there, but that the engine had been stopped and the chances for a record gone.

Wridgway drove the entire time, except between Worcester and Boston early on Wednesday morning, when A. D. Marcy took charge and when D. D. Holmes drove from Boston to Worcester on the last leg of the journey. The trip from Boston to New York, on Thursday, was without accident, though one of the tires was punctured at Rye, N. Y. It was found necessary to replace the outer casing, and twenty-five minutes were lost making the repair. Wridgway started at 3:23 o'clock on Tuesday morning, July 12, and finished at 9:08 o'clock Thursday night, having covered 1,030 miles in 65 3/4 hours.

The industrial vehicle trials, under the auspices of the Automobile Club of France, have been postponed from the middle of August until October.



A. E. MORRISON (PEERLESS) IN FULL CRY UP MT. WASHINGTON.

W.R.W.
115.

Mt. Washington Events Wind Up With a Two Days Tour.



SPECTATORS AND OFFICIALS AT THE SUMMIT OF MT. WASHINGTON.

Although the number of contesting cars in the White Mountain hill climbing contest last week was not equal to expectations, being less than one-half those said to have been entered, that fact does not minimize the event itself. It was beyond any shadow of doubt the greatest climbing contest ever held in this or any other country. This premier-ship is due to a number of causes. Former contests here and abroad have been decided on courses shorter and less steep and infinitely smoother than the one up which more than a dozen automobiles of all classes dashed last week—dashed conscious of, yet careless of, the imminent danger which beset the drivers of the cars at every turn. This danger was generally recognized, both by the drivers and the spectators, and when the last car had completed its meteoric flight into the clouds profound sighs of relief were breathed and congratulations exchanged over the happy elimination of accidents of both a major and minor character, while surprise mingled with the rejoicing, and on all sides were heard remarks from the contestants

that they would not repeat their feats for any amount of money.

The only approach to a contest of the kind was the annual climb of La Turbie Hill, at Nice, France, which was finally interdicted on account of its danger and the many accidents that had occurred. La Turbie Hill also ascends a mountain, and, while it nearly equals the Mount Washington road in steepness, it is not nearly so long. As to the surfaces of the two roads, there is absolutely no comparison. That of La Turbie is smooth and scientifically curved and graded, the typical European mountain road, marvellous in its construction, in which cost is defied, and maintained in the pink of condition by road repairers who have made a science of road repairing.

The Mount Washington road is the very antipodes of this. Its eight miles length is strewn with bowlders and liberally interspersed with "thank you, ma'ams"—there are said to be, by actual count, 365 of them, one for each day in the year. It is crudely constructed and carries little traffic; it is kept open only a small portion of the year; in short, it is a typical example of the Amer-

ican road off from the main lines of travel and of no particular importance to any one.

The ascent proper begins at Glen Cottage, from where it takes two sharp turns and drops down about one hundred feet crossing the meadow, and is very sandy for about a quarter of a mile. Then it strikes into dense woods and begins to go straight up. The first pitch is very soft, with a lot of disagreeable water bars. The starting point is a very hot place on a warm day, being on the east side of the mountain. There are several very bad turns and sharp rises of fully 20 per cent grade with soft and sandy surfaces before the Halfway House is reached.

At the fourth mile point the timber line is passed, and the road becomes all gravel and harder. The fourth and fifth miles contain the hardest climbing. In the fourth mile there is one long lift straight up for twenty-five hundred feet. Just above the sixth mile there is a short, sharp turn, and very soft, of 22 per cent grade. Just at the top of this follows a long 15 per cent grade, and at this point the contestants met with a lot of trouble. Further up the grades are not so bad, although there are several quarter-mile



HARRY HARKNESS TAKING ONE OF THE 365 "THANK YOU, MA'AMS."

stretches of 10 and 15 per cent. All vegetation disappears at the six-mile post and nothing remains but rocks. Just before the finish an easy 3 per cent grade permits the survivors to make good speed.

Bad as the surface is, it is not worse than that of many American roads, and of itself it does not give the climber the most trouble. It is the many grades and the sudden and constant turns which try the driver's nerve and test the power and reliability of the cars. As the speed is increased these difficulties increase in direct ratio. At twenty miles an hour, which was practically the rate at which Harkness ascended the mountain, the difficulties are tremendous, the danger enormous. There are places where the road borders abysses thousands of feet deep, and the narrow escapes which Harkness had in making turns just in time to escape plunging into them were hair raising.

The week's festivities were wound up on Thursday and Friday, July 14 and 15, by two tours—endurance runs, they were generally but erroneously termed—and which followed the two days' hill climbing of Monday and Tuesday and the parade of Wednesday, which latter were described in detail in last week's Motor World.

Eighteen cars started in Thursday's tour, and covered the ninety-three and one-half mile route that had been plotted. The start was made from Bretton Woods at 7:30 a. m., and the day's run was over by 6:30 p. m. The actual average speed during the run was twenty-three miles an hour, although there was scarcely a level stretch of more than a mile in all the distance covered.

Stops were made at Lancaster, Whitefield, Sugar Hill, Franconia Inn and the Profile House. Various points of interest, including the Old Man of the Mountain, Echo Lake and Profile Lake, were viewed. The party arrived at Bethlehem at 5:05 p. m., after a twenty-minute run over Mount Agassiz. A short parade was made in the village, and

the Maplewood Hotel was reached at 5:40, where luncheon was served. A short run brought them to the Mount Washington House at 6:30, all the contestants finishing in good shape.

On Friday, the concluding day, seventeen cars started, and with one exception, the Phelps car, which became disabled through a screw working into the gear case, all finished without mishap. The day's mileage totalled ninety, some of it over very trying roads.

The party left Bretton Woods at 8 o'clock Saturday morning, proceeded to Fabyans,

Twin Mountain, Jefferson Highlands, thence to the Old Glen House, the first control, which was reached at 10:15 o'clock.

At 3:25 o'clock the party left, and after a hard run through the famous Crawford Notch, Bretton Woods was reached at 4:45 o'clock, a short stop being made at the Crawford House.

On Saturday the award of prizes was made by the committee on tours, of which John B. Parkinson is chairman. The sixteen cars which finished the two days' tour under their own power were given gold medals, as follows:

H. W. Alden, gasolene Columbia, 12 horsepower; James L. Breese, Mercedes, 40 horsepower; Arthur Gardiner, Rambler, 16 horsepower; Webb Jay, White, 10 horsepower; George H. Lowe, White, 10 horsepower; Frank Nutt, Haynes-Apperson, 12 horsepower; John G. Prouty, Winton, 20 horsepower; Percy Pierce, Pierce, 24 horsepower; Harlan W. Whipple, Mercedes, 40 horsepower; Harry Fosdick, Winton, 20 horsepower; C. C. Hildebrand, Stevens-Duryea, 7 horsepower; B. A. La Mont, Cadillac, 8 horsepower; F. E. Stanley, Stanley, 6 horsepower; L. R. Speare, Winton, 20 horsepower; Mrs. L. R. Speare, Winton, 20 horsepower, and Alexander Winton, Winton, 24 horsepower.

The remaining car, the 20 horsepower Phelps, driven by L. J. Phelps, was awarded a silver medal for perfect work on the first day.

The hill-climbing contest brought out a new Rambler car, an illustration of which is here given. The cellular cooler and the individual seats are its striking features. Owing to trouble with the transmission gears, Arthur Gardiner, who drove it, retired at the two-mile point.



THE NEW RAMBLER, WITH CELLULAR COOLER AND INDIVIDUAL SEATS.

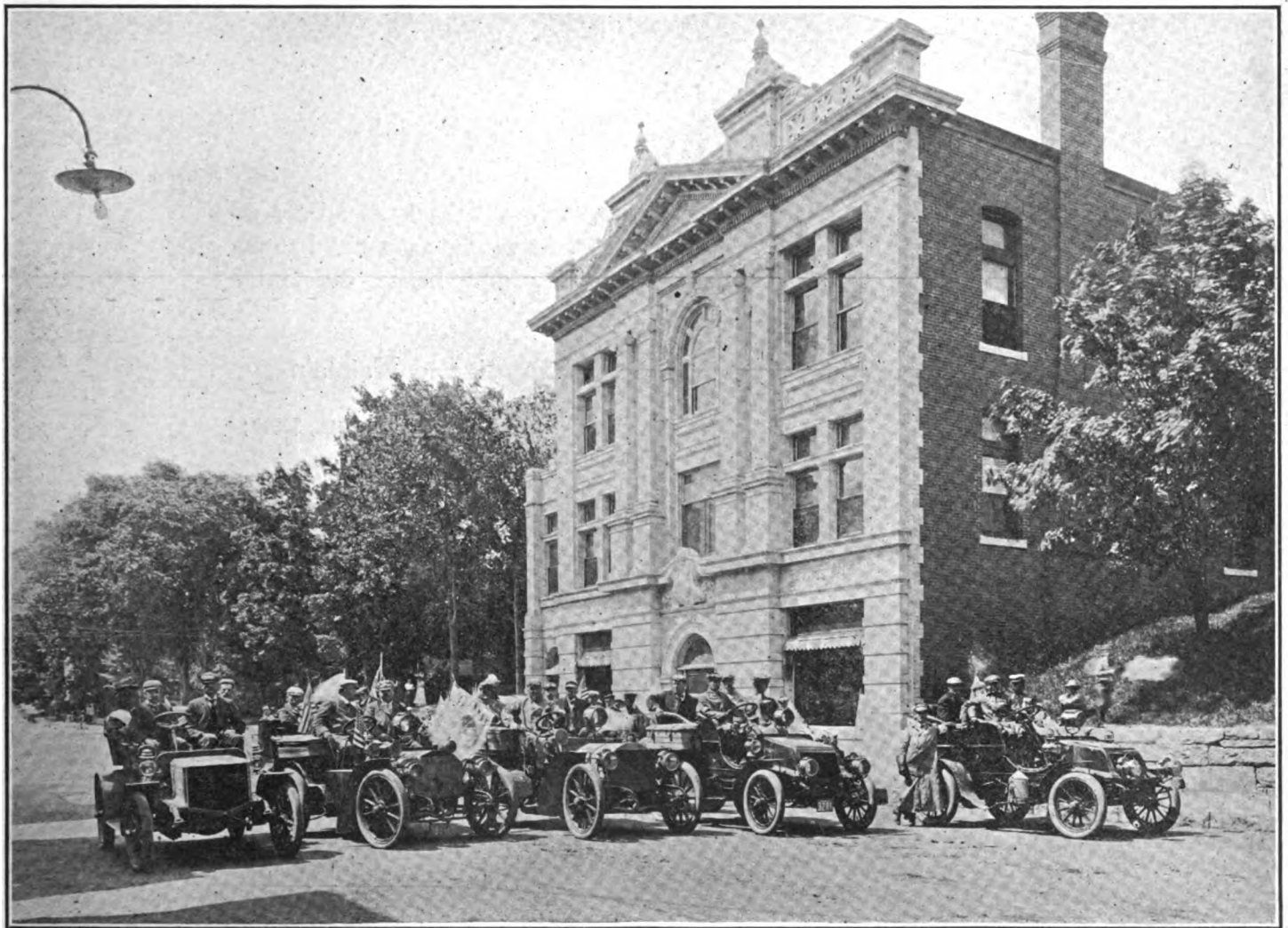
READY FOR LONG RIDE.

(Continued from page 609)

- street, Boston, Mass. Boston to St. Louis by New England and main line routes. Two passengers; drives a Franklin, 16 horsepower; member Massachusetts Automobile Club.
- Entry No. 29. Paul H. Deming, 42 West Sixty-second street, New York. New York to St. Louis by main line. Two passengers and chauffeur; drives White touring car; member of Automobile Club of America.
- Entry No. 30. George H. Lowe, 509 Tremont street, Boston, Mass. Boston to St. Louis by New England main line. Three passengers, including chauffeur; drives White touring car; member of Massachusetts Automobile Club.
- Entry No. 31. Ray D. Lillibridge, 170 Broadway, New York City. New York to St. Louis by main line. Drives White touring car.
- Entry No. 32. Webb Jay, Cleveland, Ohio. New York to St. Louis by main line.
- Entry No. 36. Cecil P. Wilson, Hotel Vendome, Boston, Mass. Boston to St. Louis by New England main line. Two passengers; chauffeur; drives a Franklin, 10 horsepower; member of Massachusetts Automobile Club.
- Entry No. 37. A. R. Pendleton, 809 North Grand avenue, St. Louis, Mo. New York to St. Louis by main line. Two passengers; chauffeur; drives Pope-Toledo, 24 horsepower.
- Entry No. 38. W. E. Metzger, Cadillac Au-

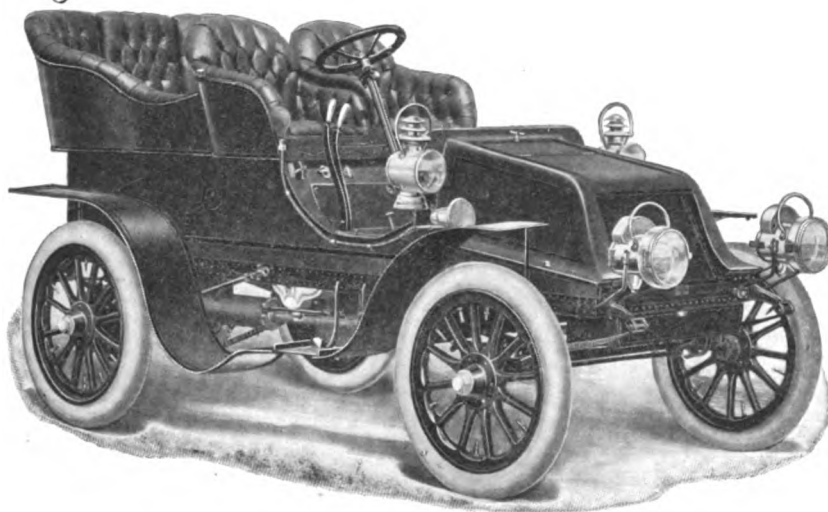
- tomobile Company, Detroit, Mich. New York to St. Louis by main line. Three passengers; chauffeur; drives a Cadillac, 8½ horsepower; member of Detroit Automobile Club.
- Entry No. 39. F. N. Manross, Forestville, Conn. Bristol, Conn., to St. Louis by New England and main line routes. Four passengers; drives a Columbia, 24 horsepower; member of Hartford Automobile Club.
- Entry No. 40. E. H. Wallace, Freeport, Pa. Pittsburgh to St. Louis. Two passengers; drives a Rambler, 7 horsepower.
- Entry No. 41. Matheson Motor Car Company, Ltd., Holyoke, Mass. Springfield to St. Louis by New England and main line routes. Three passengers; drives a Matheson, 24 horsepower; member of Automobile Club of Springfield.
- Entry No. 42. F. A. La Roche, 147 West Thirty-eighth street, New York City. New York to St. Louis by main line. Two passengers; chauffeur; drives a Darracq, 15-20 horsepower; member of Automobile Club of America and Automobile Club of Philadelphia.
- Entry No. 43. G. Douglas Neare, Union Trust Building, Cincinnati, Ohio. Cincinnati to St. Louis by National Highway. Two passengers; drives a St. Louis, 10 horsepower; member of Cincinnati Automobile Club.
- Entry No. 44. John K. List, Wheeling, W. Va. Wheeling to St. Louis by National Highway. Four passengers; drives a

- Cadillac; member of Wheeling Automobile Club.
- Entry No. 45. Dr. William J. Morton, 19 East Twenty-eighth street, New York City. New York to St. Louis by main line. Two passengers; drives an Auto-car, 12½ horsepower.
- Entry No. 46. George Otis Draper, Hopedale, Mass. Worcester to Albany by New England route. Two passengers; chauffeur; drives a Packard, 22 horsepower; member of Massachusetts Automobile Club.
- Entry No. 47. H. H. Franklin Manufacturing Company, Syracuse, N. Y. New York to St. Louis by main line. Drives a Franklin, 10 horsepower.
- Entry No. 48. W. B. Saunders, 925 Walnut street, Philadelphia, Pa. Philadelphia to St. Louis by Philadelphia, Pittsburgh and National Highway routes. Two passengers; chauffeur; drives a Winton, 20 horsepower.
- Entry No. 49. F. R. Tibbets, Ames Building, Boston, Mass. Boston to Chicago by New England and main line. Party of four, with chauffeur; drives a Buick 24-32 horsepower; member of the Massachusetts Automobile Club.
- Entry No. 50. James M. Waters, 80 West Fortieth street, New York City. New York to St. Louis by main line. Chauffeur; drives a 24-horsepower Panhard.
- Entry No. 51. Percy P. Pierce, 18 Hanover street, Buffalo. Boston to St. Louis. Chauffeur and mechanic; drives Pierce Great Arrow; member of Buffalo Automobile Club.



MT. WASHINGTON TOURISTS AT LITTLETON, N. H.

WINTON



Known by Its Work

the WINTON is famous. It goes there and back as surely as the sun rises, as easily as a bird flies, as safely as a child slumbers on its couch. Constantly reliable and hence constantly praised by those whom it serves.

Easiest to Control.

Least Expensive to Maintain

Equipped with canopy top, lamps, horn, tools, etc., \$2500 ;
without top, \$2300 ; l. o. b. Cleveland.



THE WINTON MOTOR CARRIAGE CO.

Member A. L. A. M.

CLEVELAND, O., U. S. A.

New York,

Boston,

Philadelphia,

Chicago.

WINTON AGENCIES EVERYWHERE.

PROMPT DELIVERY ASSURED.



Phew! An English motorist has been fined \$250 for offering a policeman to "forget it."

A race meet to be held the latter part of this month is projected by the Fort Wayne (Ind.) Automobile Club.

Will H. Colvig and Guy A. Proir reached Terre Haute, Ind., last week, having started from Wheeling, W. Va., on July 6, en route to St. Louis. They are driving a Cadillac car.

San Francisco motorists now have a special driveway set apart for their use. It is in the eastern end of Golden Gate Park, and was formally opened on July 11.

S. C. Coleman, accompanied by his wife and a chauffeur, is touring to Lansing, Mich., and will go from Lansing to New York. The car used is a Pope-Toledo.

The automobile has many advantages over the horse. Their owner cannot be arrested for abusing them. They do not have to have their tails cut to be stylish; the only animals to get hurt are those in front of them.

With thirty-five charter members, a club has been organized at San Diego, Cal. The officers are: President, Roy Howard; vice-president, W. J. Wagner; secretary, George N. Nolan; treasurer, W. F. Harbison.

A race meet, to be preceded by a parade, will be given by Knoxville (Tenn.) motorists, a committee of three having been appointed to take charge of it. A date late in July or early in August will probably be selected.

Joliet (Ill.) motorists have taken the preliminary step toward organizing a club. A run will be taken to a nearby resort, after which a meeting will be held and an organization effected.

Hatboro, Pa., is a little fairer than most other towns. It has just passed an ordinance which makes eight miles an hour the maximum speed, but it is applicable to all vehicles and not to automobiles alone.

Phillip R. Brooks, of Minneapolis, Minn., and a friend, Sidney R. Kennedy, of Brooklyn, passed through Syracuse, N. Y., last week. They are driving a Columbia touring car from Hartford to Minneapolis.

Six miles an hour is the maximum speed permitted automobiles in the National Soldiers' Home at Dayton, Ohio. One of the inmates was run over by an automobile recently; hence the edict.

The "Red Necktie" is the pleasingly novel appellation bestowed upon John Farson's newest automobile. It has reference to the Chicago man's fondness for neckwear of vivid tints.

It is a good idea to use rain water for cooling the cylinder, especially in the summer, when any deposit in the cylinder jacket is apt to cause overheating. By using water free from mineral salts this deposit in the jacket may be overcome.

The Austrian Automobile Club, as in previous years, will hold its hill climbing race on the Semmering on August 21. The distance to be climbed will be ten kilometres (six miles). The hill has an average incline of 10 per cent.

With fourteen charter members, the Lorain Automobile Club, of Lorain, Ohio, has been organized. Officers were elected as follows: Dr. Frederick, president, Captain Thew, vice-president; I. Honecker, treasurer, and Frank Floding, secretary.

Dr. G. W. McCaskey, of Fort Wayne, Ind., is planning to go to Detroit and then across Ontario to Niagara Falls, returning home by way of Buffalo, Cleveland, Sandusky and Toledo, covering nearly one thousand miles and visiting all the points of interest en route. He will be accompanied by his family.

The mutable Charles M. Schwab has, so it is reported, turned his attention to automobiles again. He has ordered a 100 horsepower car, and proposes, as he puts it, to "make the present Paris-Calais record look like thirty cents."

Because J. K. Sullivan has "imported" into Newport, R. I., a big passenger automobile, to be used for hire, the cabmen of that ultra-fashionable resort are up in arms. They seek to prevent Sullivan's obtaining a license. The "cottagers" are "backing up" Sullivan.

Beconnais, a well known French racing chauffeur, was killed early this month while speeding his car near Bordeaux. It is supposed that his tire burst and he lost control of the car, which dashed into a tree and was completely smashed. Both Beconnais and his mechanic were instantly killed.

The first week in September will probably be the date selected for holding the Rhode Island Automobile Club's race meet. At a recent meeting of the board of governors the matter was discussed, and was finally turned over to the runs and tours committee, with power to act.

A new home has been taken possession of by the Toledo Automobile Club in The Collingwood, on Collingwood avenue, where the entire first floor has been leased. The suite will be the permanent home of the club, and comprises parlors, dressing rooms, smoking and dining rooms and a dancing hall.

The youth who defined electric ignition as "the thing that hots the engine" was recently guilty of another apropos saying. A friend asked what sparking plugs a fellow motorist used, to which the latter replied "None," his car being fitted with magneto ignition. "Then how do you bust the gas?" asked the kid, who was attentively listening.

Whitman Osgood and family, of Washington, D. C., with a chauffeur, left that city last week, via Frederick and the old National pike, enroute for the World's Fair. They took the southern route through Wheeling, and expect to reach their destination in about ten days.

Mr. and Mrs. E. Leibe McCalley, Mr. and Mrs. W. D. Oglesby, Miss Allen, Miss Wilson, E. T. Gardner and R. C. Sullivan, all of Middletown, Ohio, are en route to the St. Louis Exposition. They passed a night in Terre Haute last week. The party is travelling in two automobiles.

It is said that the German government is proposing to make speed indicators compulsory for motor cars. The idea is to make drivers responsible in the case of accidents, whenever it is proved by the indicators that they have exceeded the legal limit. It would be interesting to know where the government proposes to get these indicators.

War—danger deriding, death defying, bloody, unmerciful war—is to be waged on the automobile, the touring car, the steam car, the electric go-some and all manners and forms of the devil's wagons, is the blood-curdling way in which the Portland (Ore.) Oregonian heralds a crusade against motorists of that city.

The commissioners of Lincoln Park, Chicago, have found that automobiles are wearing the park drives away! Two new steam rollers, to cost \$4,550 each, will be purchased to repair the damages. It is a pity that details are not given, as it would be interesting to know how the automobiles "wear away" the drives. Perhaps they carry away the roadbed in sections.

Unless they exceed the limit of four miles an hour, motorists may continue to use the roads in Overton Park, Memphis, Tenn. It was proposed to exclude them altogether, but the authorities were finally induced to yield to the supplications for mercy. Should any one exceed the four-mile pace, however, the sword of Damocles which is suspended over the heads of motorists will fall.

So much complaint has been made by Providence, R. I., motorists of broken glass being thrown in the streets that the police have been asked to see that the existing ordinance respecting the matter be enforced. It is said that some policemen are zealous in removing glass from the streets, while others pay no attention to these menaces to public safety. The Rhode Island Automobile Club has written the chief of police regarding the matter.

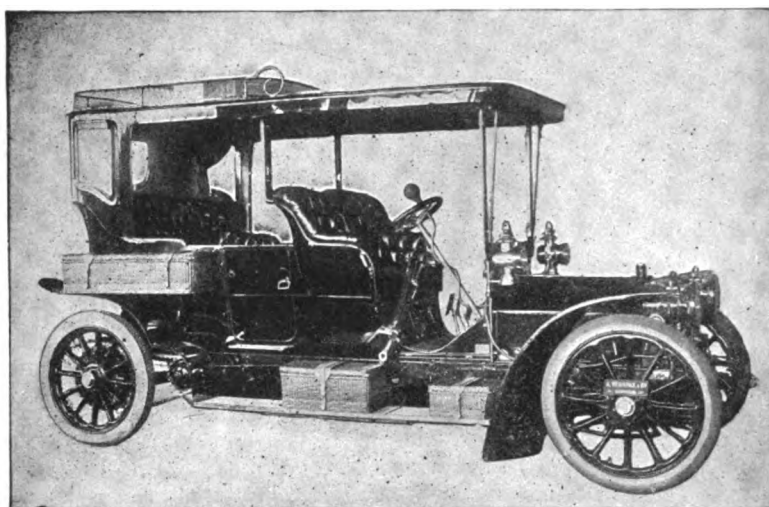
THE MT. WASHINGTON CONTEST

SIMPLY ENABLED THE

MERCEDES

TO AGAIN DEMONSTRATE ITS
SUPERIORITY.

Driven by Mr. Harkness it simply romped up the steep, boulder-strewn, eight mile grade in 24:37 3-5—minutes ahead of its nearest competitor.



ON THE EMPIRE CITY TRACK,

July 18,

“THE CAR THAT SET THE FASHION TO THE WORLD”

Set Up

FIVE NEW WORLD'S RECORDS

From 16 to 20 Miles inclusive—the Twenty Miles in 19:37 1-5.

PROMPT DELIVERIES.

ALLEN, HALL & COMPANY,

69 Wall Street and 89 Beaver Street,
NEW YORK CITY.

Sole Representatives of C. L. CHARLEY, Paris, France, and Sole United States Agents for
MERCEDES Automobiles.

ON SOUTHERN NEVADA ROADS

Experiences of a Mining Engineer with a Peerless Car in a Railroadless Country.

"Automobiling in Southern Nevada has its difficulties," said M. L. Requa, of San Francisco, to a Motor World man. Mr. Requa is the mining engineer of the White Pine Cop-

successful motoring in that country, Mr. Requa says it is necessary that a car have sixteen inches clearing between the rear axle and the ground, and that the mechanism be made as near dust proof as possible.

The roads are not of a sandy nature, but consist of gravel, with a lime deposit. The illustrations will give some idea of the grades as well as the character of the road, hotels, etc.

AT RUTH, NEV., 75 MILES FROM THE RAILROAD.

RACI G AT ST. LOUIS

Contests Planned to be Run in August at the Exposition—Program for Opening Meet.

Arrangements have been completed for the World's Fair automobile races, to be held at St. Louis next month. At planned at present, the opening contests will be held on

A TYPICAL NEVADA HOTEL.



7,800 FEET ABOVE THE SEA LEVEL; OUT OF GASOLINE.

A NEVADA ROAD; SHOW CROWN BETWEEN THE RUTS.

per Co. of Ruth, Nev., which is located seventy-five miles off the railroad.

Mr. Requa has been making the trip to and from the railroad in a 16 horsepower Peerless. The road over which he was compelled to travel was cut into deep ruts by the heavy ore wagons—so deep, in fact, that his rear axle would rest on the ridge between the ruts, leaving the wheels to spin in the air.

In making the trip from the railroad to Ruth it is necessary to cross five ridges, which attain an altitude of 7,800 feet. To do

Bogus Count was a Smuggler.

Once more the automobile has been employed by smugglers to bring goods into France without paying the duty the paternal government of that country levies.

It appears that a party of finely dressed tourists, presumably a count and countess with a friend, has been crossing the frontier repeatedly. The suspicions of the authorities were at last aroused. The automobile was stopped and searched, and the pseudo count and countess were found to be notorious smugglers. Their fine raiment as well as their automobile was simply loaded with all sorts of dutiable stuff.

Saturday, August 20, at which time eight races will be contested.

The programme includes a five-mile race for cars weighing between 881 and 1,432 pounds for a prize valued at \$100; another for cars of 881 pounds or less will be run over the same distance for a prize of similar value. A ten-mile race for machines weighing from 1,432 to 2,204 pounds will have as first prize the Louisiana Purchase trophy, valued at \$500, and a second prize worth \$100. In the twenty-five-mile race, for cars between 881 and 1,432 pounds, the Missouri Cup is offered, with a valuation of \$100, and purses for the first car at various distances.

TOURS UNEXPLORED MAINE

Lowell Motorist Traverses Remote Sections where
Automobiles had Never been Seen.

Animated by the spirit of the pioneer, which impels man to push forward into new and unknown regions, George R. Dana, a Lowell (Mass.) motorist, a short time ago toured from that city into Maine, driving his Stanley steam car almost to the Canadian border and traversing sections never before visited by an automobile. In all, he covered 881 miles in seven days' running time, including a run of 193 miles on the first day.

It was a trip entirely devoid of anything sensational. There was an even tenor of good motoring the whole distance of the 800 miles, and Mr. and Mrs. Dana and their son, Russell, landed in Lowell after the journey, thoroughly convinced that a good machine, with careful handling, can be steered into about any nook and corner of New England.

Mr. Dana left Lowell early on the morning of June 17, having as his special objective point the town of Kingfield, Franklin County, Me.

The trip in Massachusetts began with a spin out Andover street, through West Andover to Georgetown and to Newburyport, a distance of thirty-four miles. Here he stopped for water, and after filling up the tank sped for Portsmouth, N. H., across the toll bridge which spans the Piscataqua River, entering the State of Maine at Kittery, York County. Through York Village, Ogunquit, Wells, Kennebunk and Biddeford the Danas went, stopping for luncheon at the latter place.

While not seeking for a record, Mr. Dana realized that time was worth a great deal to him, and after luncheon started on his way again. He crossed the Saco River into the city of Saco, and then leisurely drove through Cumberland County, striking the towns of Buxton, Gorham, Winham and Danville Junction, at which place he entered Androscoggin County. The scenery was getting rugged here, mountains began looming up and roads were tortuous. Mr. Dana realized that he was probably doing what few runners of either steam or gasoline cars had done. He arrived at Auburn about 5:30, a distance of 158 miles from Lowell.

He next started up the bank of the Androscoggin River for Livermore Falls, which he should have made before dark had not an acetylene lamp given him trouble. An hour was consumed in getting the new lamp into condition, and then on he went again, up steep hills into Cimmerian darkness, arriving at Livermore Falls shortly after night had set in. And here he decided to take a rest, having, according to his odometer, made 193 miles exactly during the first day.

June 18 Mr. Dana and family started for Jay, and soon had reached Farmington, where the broad gauge railroad system of Maine ends. Kingfield, the objective point of the trip, was reached at 3 o'clock in the

afternoon, 239 miles from the Spindle City.

After a day of rest the party got into running order once more and drove over Ridge Hill, a famous point in Maine. This time absolutely new roads to travel had been located. The Carrabassett Valley was traversed, but driving here was under difficulties usually, the roads being narrow and generally grassed. The Carrabassett River was crossed at Flagstaff. Here the new road was as near impassable as anything Mr. Dana had met. It was filled with holes, was soft, had sharp rocks in it and gave a deal of trouble. The famous hunting grounds of the Lower Dead River were run through. Eustace was touched, a point twenty miles north of any railroad system in Maine and within twenty-eight miles of the Canadian border. Stratton, Copeland, Line, Plantation and Rangely were hit in turn. The driving was necessarily slow here.

"If I met a team in the road the horses usually fiddled around at the sight of my machine," said Mr. Dana, "and I had to try my powers of persuasion on both man and beast in order to get them to pass me. Most of the people in this section were kind and willing to learn about automobiles, but a few thought the world was surely coming to an end when such infernal four wheeled things were sent along the roads without any pushy or pully visible.

"With all due respect to the inhabitants, I must say that I was like a circus in a country town. I was it, and was the one thing that caused every living soul to come out of doors and peep at me. I blew the horn as I neared the house, and the inmates of it would hustle to the windows to see what was coming up the road. Some would shout, as we passed by, at the very top of their lungs, 'Go it!'

"Good roads are found in this part of Maine, but they are so crooked that one can't put on a bit of speed without incurring the danger of running down some lone horse driver who may be coming in the opposite direction.

"In villages, if I stopped for water, I was the real thing. I would have a gathering 'round me in no time. The entire population would begin firing questions at me, asking what the machine cost, how fast it would go, how far it could run, who made it, what style it was and every conceivable interrogation. But they were universally kind in their questions and subsequent comments."

From Rangeley Mr. Dana went to Phillips, over a twenty-mile road that but one car had ever travelled before. That car, a big one of the touring variety, had been pulled over the road by four horses. There were long hills of 90 degree inclines here and trout brooks with corduroy bridges that sank into the crashing waters when the machine went over them.

He struck Phillips on June 21, during the middle of the afternoon, having gone entirely around the mountain ranges of Franklin and Somerset counties.

On June 23 a third trip was essayed over such places as Highland Plantation. "I was

out as much to study nature and human nature as to see what my machine could do," said Mr. Dana, "and I found very interesting people in the mountain districts. In one place I saw a woman berrying. A baby carriage with a big headed youngster in it was near by. The woman literally drank in the machine. She wanted to know where my horses were, and how the 'masheen' could go if 'hosses' didn't haul it." Not far from this rustic group Mr. Dana chanced across persons of the utmost refinement, who, although they were not familiar with automobiles, nevertheless did not class them as devil machines or look upon the occupants of them otherwise than as people of gentle manners. They asked Mr. and Mrs. Dana and their son to have a meal in their house. They always ate in the kitchen, but invariably kept a snowy white long table to entertain travellers on. They longed for companionship, wanted to embrace the ideas of city folks, and one of the pleasantest incidents of the trip, said Mr. Dana, was the half hour spent with this refined couple.

From Highland Plantation the party went back to Flagstaff and thence to Eustace. "Phud" Hall, a noted guide and hunter, was called on, and then the drive down the Carrabassett Valley was begun anew. A hundred and nine miles over new roads for automobiles had been made in just ten hours.

On Monday, June 27, Mr. Dana started home, through North Anson, Norridgewock and Waterville, travelling down the banks of the Kennebec River for fully one hundred miles. Through Augusta, Hallowell, Bath and Brunswick and smaller places the Dana crew ran, stopping for the night at Freeport.

On June 28 a run was made to Portland and Old Orchard beach, to Saco, Biddeford and then the track of the start was doubled to Portsmouth. In Wells and Ogunquit the roads are kept in beautiful condition. Signs warning automobilists not to run faster than eight miles an hour are found in these towns, and through the villages chauffeurs are warned to go slow. The fastest road on the entire trip was between Portsmouth and Newburyport.

Lowell was reached on Tuesday, June 28, about 7:30 o'clock in the evening, the return trip having been of 271 miles distance. During the twelve days' outing 881 miles were covered, although on only seven days of that time was the machine in motion.

American Girl Tours Abroad.

American tourists abroad are now becoming quite common, but there are few women motorists who have driven their cars as far in foreign lands as Miss Eloise M. Weld, the daughter of General Stephen Weld, of Dedham, Mass. While in India Miss Weld sent to A. T. Fuller, the Boston dealer, for a Northern runabout. She used it extensively there all winter, and is now in Paris, where she finds much enjoyment with it on the excellent boulevards in the vicinity of the French capital. Before returning home Miss Weld writes that she will have covered nearly five thousand miles in her little runabout.

MICHIGAN NEW MODEL

Details of Kalamazoo Concern's Popular-Priced and Powerful Light Touring Car.

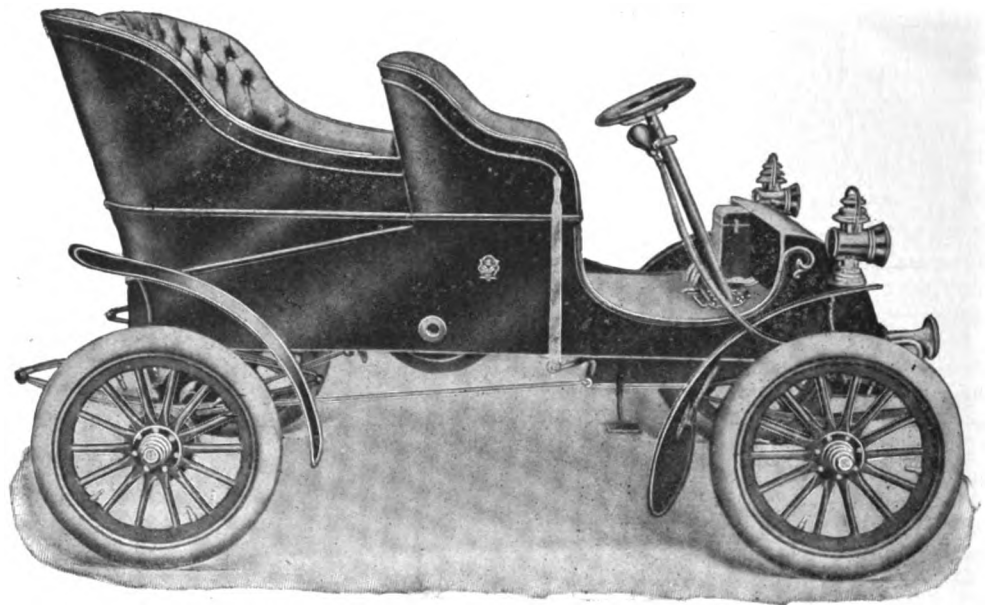
An unusual vehicle in many respects is the Michigan light touring car, the new model made by the Michigan Automobile Co., Ltd., Kalamazoo, Mich. It is avowedly a "combination" car, being convertible from a roomy, comfortable tonneau to a neat, trim runabout, and possessing, in either form, the requisite qualities, such as ample power, lightness and compactness, for making an easily handled and satisfactory all-around vehicle.

The sub-title of this model—"the Car of Power"—is an apt one. In designing it the aim was to provide an ample reserve of power, such as would enable it to readily traverse the worst roads and surmount the steepest roads with the full complement of passengers; to make it, in fact, a link between the big, expensive four-cylinder and the runabouts and light touring cars which are so much in evidence at the present time. This object has undoubtedly been achieved, the result being a reliable, durable, full-powered yet low-priced car, that will perform satisfactorily under the most trying circumstances.

The power plant consists of a horizontal, double-cylinder, opposed motor, located centrally in the frame and developing twelve actual horsepower at 1,000 R. P. M. This motor is built very strongly, with long bearings, heavy crank shaft, easily lubricated, of good proportions, giving thorough adjustability without superfluous weight.

The cylinders are bored $4\frac{1}{2}$ inches in diameter, with 5-inch stroke. They are exactly alike, the same castings being used for both cylinders. They are water jacketed and require no packing against water leakage. They are bolted to the crank case, which is of gray iron and divides lengthwise in the centre. In case it is desired to remove the pistons, the upper half of the crank case can be quickly detached and lifted off, exposing the whole of the crank shaft, connecting rods and timing mechanism. If the pistons or crank shaft need removal, this can be done without taking the engine off the frame or disturbing any other part of it. The lower part of the crank case is also removable, to enable one to inspect or repair the valve actuating mechanism, which is all mounted in this section of the case.

The valves are mechanically operated, and are $2\frac{1}{8}$ inches in diameter, with $\frac{5}{8}$ -inch stems. A steel stem with a disk on the end pushes against the end of each valve stem, while the other end is actuated by the cam on the time shaft. Three cams are used. The exhaust actuating stems are provided with hardened steel rollers for the cams to strike against, and ample provision is made for adjustment to take up wear of both inlet and exhaust valves, without the least diffi-



MICHIGAN LIGHT TOURING CAR.

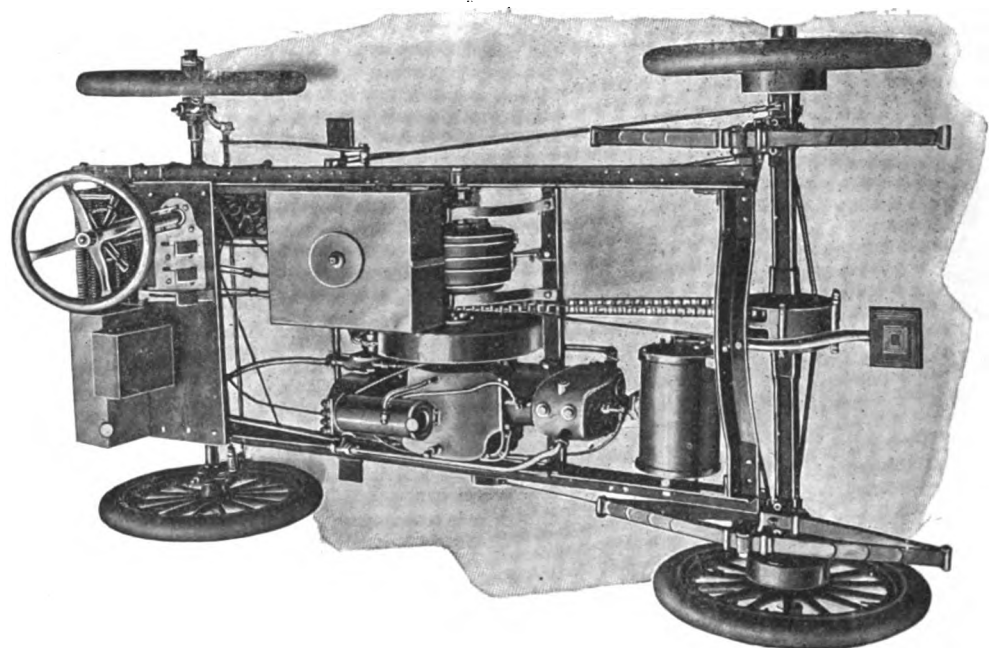
culty and without opening the crank case. The cam shaft runs just below the crank shaft and parallel with it, and is driven by a bronze spur gear and steel pinion, all being located within the crank case, for avoidance of noise, freedom from dirt and ease of lubrication. The crank shaft is a drop forging, with journals long and heavy. All are ground to size. The outer bearings are $1\frac{3}{4}$ inches in diameter and 3 inches long, and the connecting rod journals are $1\frac{3}{4}$ inches in diameter and $1\frac{3}{4}$ inches long.

Jump spark ignition is employed, and the spark plugs are located in the ends of the cylinders above the valves.

The frame is made of stiff angle Bessemer steel, 3x2x5-16 inches. The long 3-inch leg runs up and down, supporting the great pull and weight of the engine, transmission and body. The parts of the frame are riveted

together, short sections of the angle steel being used as corner supports. The radiator is firmly held in position between the front extending projections of the frame. The frame rests upon double elliptic springs, both front and rear. These springs are of high quality, being oil tempered and made from "Pennsylvania analysis" special steel, those in front being 32x1 $\frac{1}{4}$ inches, with five leaves, and those in the rear 36x1 $\frac{1}{2}$ inches, with five leaves. They are very flexible and contribute much to the easy riding of the vehicle.

These springs are clipped to the front and rear axles. The front axle consists of Shelby seamless steel tubing, with very heavy walls. The outside diameter is 1 $\frac{1}{2}$ inches, wall $\frac{1}{4}$ inch thick. The steering yokes are firmly brazed and riveted to this axle, and consist of heavy steel forgings. The steering knuckles are also heavy steel forgings, and



PLAN OF CHASSIS.

carry the front wheels on a 13-16-inch spindle, which is a part of the knuckle forging. The bearings of the front wheels are 1/2-inch balls. The knuckles and yokes are held together in the usual manner by a steel bolt, and the whole construction is heavy and solid.

The rear wheels are attached to the axle in the usual manner, all wheels being made of second-growth hickory, 14 spokes, and provided with 28x3-inch Diamond detachable tires.

The wheel base is 78 inches and the tread 55 inches. This long wheel base provides plenty of room in the body, both in front and in the tonneau, without the rear overhang so disagreeably noticeable on many cars. It makes the steering and riding easy.

There are two sets of brakes provided, both on the rear axle. The primary brake consists of a fibre lined band around the differential, and is sufficient for all ordinary use. The secondary, or emergency, brakes are two powerful expanding ones, located on the inside of the rear wheels. Both brakes are actuated by foot levers. They are sufficient to stop the car under any possible contingency, and are of the utmost importance to the safety and lives of the occupants of the car.

A simple and strong planetary transmission, having two speeds forward and a reverse, is used. It has a central gear attached to the shaft and two sets of pinions, consisting of three gears each, which are cut from a solid bar and hence are very rigid. They run in oil, the chamber containing them holding about two quarts. It is filled from a single hole, and one filling should last about one thousand miles of ordinary travel. The transmission shaft is connected with the engine shaft by a flange and bolts, so that the transmission may be removed without disturbing the engine in any way. No internal gears are used or needed.

The clutch is next to the engine and is a powerful affair. It is of the ring and disk variety, and, on the high gear, clamps everything tightly together, so that no gears are running, but all revolve with the gear case.

Eight Columbia dry cells are employed for the ignition, forming two separately connected units of four cells each. A Dow double coil of the dashboard-type and a Dow patent commutator are also used. The latter has platinum iridium sparking points.

The control is admirably simple. There is but one lever, which is located just outside the body and within easy reach of the hand, and is not in the way when one gets into the car. Straight-up is neutral, back is low gear, forward high gear. There are three foot pedals, plainly marked on the foot plate as follows: "Reverse," "Primary," "Secondary," the last two referring to the brakes. The secondary (emergency) brake pedal has a ratchet. It is plain that there is no excuse for not being able to stop this car. If a person gets "rattled" or makes a mistake, he can't push a pedal that will not have the effect of stopping the car.

The steering column is covered with pol-

ished brass tubing, on the top of which is mounted the tilting steering wheel. This enables any driver to easily take his seat, however corpulent he may be. The throttle and spark advance are located on the steering column, just below the wheel, and are held in place by toothed segments. The muffler cut-out is operated by pressing a foot button.

The bodies are strongly made, of the best poplar sides and hardwood frames, and are roomy and of graceful outline. The seats and tonneau are one-piece bendings—not "made up" corners. The tonneau is removable, and a decking is supplied to take its place when it is desired to use the car as a runabout. The price is \$1,000.

Six is Vance's Favorite Number.

Saginaw, Mich., has an alderman named Vance, who was born a century or two too late. He has introduced an ordinance limiting the speed of automobiles to six miles an hour, and requiring numbers six inches in height (six seems to be his favorite number) to be affixed to each automobile.

Naturally, the local motorists object to this. So a hearing was granted them, and when they objected to the size of the numbers Alderman Vance had a proposition to make. In order to decide this question Alderman Vance says that he will try and get two automobilists to let him hang four and six inch numbers on the back of their cars, and then have them run down some street at a good rate of speed. He will then have a man ready, and when the machines are abreast of him he will be rolled in the ditch a few times and then given an opportunity to see which number he can read before it passes out of sight. Vance thinks this would effectually settle the matter, and that if the four-inch number is read it will be demonstrated that that size will be sufficient.

The speed limit was also discussed. The ordinance calls for six miles an hour, and the autoists think that a farce. Alderman Vance thinks that it is all right. It is the same with the speed limit for horses. Nearly every driver of an animal exceeds the limit, but it is only when careless drivers exceed it that the police interfere, he says. So it will be with the autoists. If they are driving their machines with due care and are not running at an excessive rate of speed, they will not be interfered with, but where they become careless or indulge in racing the officers will be expected to interfere and compel the offender to stick to the limit. The committee finally decided to take the matter under advisement, and will not make a report for two weeks.

Former District Attorney a Victim.

The first victim of Lower Merion Township's decision to hold speeding automobilists for court instead of fining them was P. Fred Rothermel, former District Attorney of Philadelphia. He was taken before Justice of the Peace Brook, who fixed bail at \$200. He declares that he will fight the case to the end. Lower Merion is a fashionable suburb, located a few miles outside of Philadelphia, on the famous Lancaster Pike.

John and His Folding Car.

"Speaking of automobiles," said the man with an automobile cap, "reminds me of the adventures of a friend of mine back in Merrill, Wis. His name need not be mentioned, but we will call him John. John had an idea that if there were folding beds that there ought to be folding automobiles, and as he was a mechanical genius he set about making such a contrivance. After much work he did succeed in making something in the shape of a folding automobile. He put the thing in a large leather sack, and put a handle on it so that it looked something like a huge dress suit case. When he came to lift it he found that it weighed a good deal, but still he could carry it. I suppose that the affair weighed 125 pounds, and he had made it as light as he possibly could. Well, folded up, it was certainly fearfully and wonderfully made. The day came to try the machine on the road. John had used the machine all right before he folded it up, and now he was to use it after it had once been folded.

"Everything was in readiness for the test, and John had invited myself and a number of friends to witness the performance of the wonderful machine, for it certainly was wonderful. To make a long story short, the automobile folded up while it was going and folded our friend John in the middle of it somewhere. He recovered in a few weeks, but he still bears the marks where the folding caught him. He now rides in a buggy and drives a very tame and gentle old mare, and eschews automobiles."

Four Days Run to Tonopah Mines.

What is claimed to be the first run in an automobile from San Francisco to Tonopah was completed recently, when Harry A. Lemmon and his chauffeur, C. Elder, arrived in the Nevada mining town, after climbing over the Sierra Nevada mountains. The start was made from San Francisco on Saturday afternoon, and Carson City was made in four days, after twenty-four hours had been spent at Tallac, Lake Tahoe. From Carson City the route led to Soda Springs and thence to Tonopah. The men had a rough trip over the mountains, it being a 6,900-foot ascent to the summit. The climb was a long one, but was not marred by any accident.

This Clutch Helped Thery Win.

Thery, the winner of the Bennett Cup race, ascribes his victory in part to the splendid working his clutch. On the car which he drove a system is used by which, while employing the old and useful leather-lined cone clutch, a positive locking system is employed. By means of this, when the car is once started, the leather no longer supports the strain, as by bolts which slip into the flywheel the whole strain is taken off the leather, and the drive becomes positive from the engine to the road wheels, with no possible chance of slipping.

A record stands to the credit of the Peoria (Ill.) Automobile Club. Its roster contains sixty-seven names, which includes every motorist in the town. The last recalcitrant came into the fold at a recent meeting.

Flanged Wheels for Glidden Car.

There are railway inspection cars and other motor propelled vehicles designed to be used on the steel rails, and the Waltham Manufacturing Company has even devised a set of flanged wheels to be substituted for the regulation pneumatic tired ones with which its Buckboard is equipped. Now come the makers of the Napier car, who have produced for Charles J. Glidden a set of similar wheels for use on the famous globe girdler's car, with which he starts this month to complete his 40,000 mile journey.

A dispatch from London states that the Napier Works at Actonvale have just completed a set of wheels with steel rims and flanges to be used by Charles J. Glidden on his world touring expedition upon tracks of railway in certain sections of the United States, Canada and Mexico, also in the Orient, where it is not feasible to drive on the wagon roads, and in places where roads do not exist.

The gauge of the car used by Mr. Glidden is that of the standard railway gauge, and a test of the car equipped with the new wheels on a spur of English railway lines was a complete success. A change can be made from the rubber tired wheels to the railway wheels in 30 minutes, and the set of wheels not in use will be shipped in advance or carried on the car.

By this method Mr. Glidden will be able to reach sections of the world that it would be impossible to drive to on the usual rubber tired wheels, and by the aid of a cog-wheel some high mountain elevations can be attained with the automobile.

Men to Manage Newport Meet.

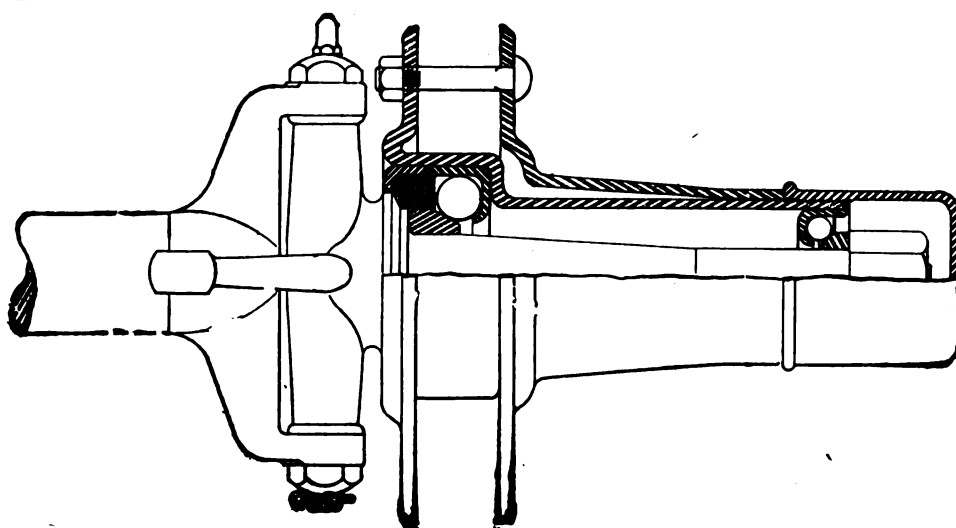
The officers of the Newport Amusement Association, which is promoting the races to be run on July 30 on Sachusset Beach, are as follows: President, F. P. Garrettson; vice-presidents, Reginald C. Vanderbilt and William R. Hunter; executive board, F. K. Sturgis, Center Hitchcock, Hamilton Fish Webster, Alfred G. Vanderbilt, Clarence W. Dolan, Egerton L. Winthrop and Harry F. Eldridge.

"The Motor, What It Is and How It Works." See "Motorcycles and How to Manage Them." \$1. The Goodman Co., Box 649, New York. ***

WHITE BULLETIN
NUMBER SIX

CONTAINS THE
PRELIMINARY
ANNOUNCEMENT OF
THE 1905 MODEL
**WHITE STEAM
TOURING CAR**

THE WHITE SEWING MACHINE CO., CLEVELAND, O.



THESE HUBS are drawn from Sheet Steel.

Extremely light and strong Hubs with a smooth surface for finish are obtained.

Center line of Spokes is close to Steering Head. Smooth and Easy Steering is obtained.

Races are GROUND IN POSITION. Cones and Cone Seats on Spindles are GROUND TO GAUGE.

We manufacture for the trade only.

**THE AMERICAN BALL-BEARING CO.
CLEVELAND, OHIO U. S. A**

The Week's Patents.

764,104. Friction clutch. Thomas W. Barber, London, England. Filed April 3, 1903. Serial No. 150,888. (No model.)

Claim.—1. In a clutch mechanism the combination of a revoluble driving member, a revoluble driven member mounted in axial line therewith, a stationary member having an interior braking surface concentric with and surrounding one of the aforesaid revoluble members but free of the same, a split ring surrounding a revoluble member inclosed by the braking member, means for contracting the split ring upon the revoluble member it surrounds, means for expanding it against the braking member and a lug rigidly secured to the side face of the ring and engaging a recess in the revoluble member not surrounded by the ring so that no driving strain is put upon the mechanism for contracting or expanding the ring, as set forth.

764,131. Pneumatic valve. John E. Keller, jr., Litchfield, Conn. Filed September 8, 1903. Serial No. 172,397. (No model.)

Claim.—1. The combination with a tire having a tubular stem formed integral therewith, and the rim of a vehicle wheel having an opening for said stem, of valve mechanism fitted in the stem and having a

flange extending over the end of the stem, a tubular collar surrounding the stem and having lateral extensions between the tire and the wheel-rim, and a retention cap having an opening therein for the passage of the upper portion of the valve mechanism and adapted to engage with the flange on the valve mechanism, said retention cap being positively secured to the tubular collar.

764,140. Vehicle wheel. Thomas Midgley, Columbus, Ohio, assignor to Hartford Rubber Works Company, a corporation of Connecticut. Filed August 19, 1903. Serial No. 170,092. (No model.)

Claim.—1. In a vehicle wheel, a rim adapted for use with an elastic tire, said rim having an outer tire face and an inner flat hub face and having also a flange-seating portion which does not project beyond either the shaft tire or hub faces, a side flange for said rim, and means for varying the circumference of said flange to effect the engagement and disengagement thereof with the flange seating portion.

764,161. Self locking steering gear for automobiles. Reuben O. Stutsman, Peoria, Ill. Filed October 30, 1903. Serial No. 179,642. (No model.)

Claim.—1. In a self-locking steering device, the combination with an axle, two spindles journaled thereon, and a rod connecting said spindles, of a plate slidably mounted on the axle and provided with an elongated cam slot having a central straight portion, a pin connected with the said rod and extending through said slot and means to move said plate.

764,183. Method of separating mechanically entrained globules from gases. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Storage Battery Company, Orange, N. J., a corporation of New Jersey. Filed November 28, 1902. Serial No. 133,120. (No specimens.)

Claim.—1. The method of separating, from the gases generated in a storage battery, mechanically entrained globules, which consists in forming a liquid film in the path of the gases, and in directing the gases and entrained globules into contact with the film at sufficient velocity to overcome the surface tension of the film, whereby the entrained globules will coalesce with the film and be separated from the escaping gases, substantially as and for the purpose set forth.

764,263. Motor coach. Roy Stone, New York, N. Y. Filed December 1, 1902. Re-



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newed November 30, 1903. Serial No. 183,280. (No model.)

Claim.—1. In a motor-coach, the combination with a coach body of substantially U shape in plan, of an interior seat conforming with the shape of the coach body, a front platform substantially level with the coach body floor, a roof having a central longitudinal arch therein, seats arranged on the roof around the sides of said arch, means of access to the said roof from the said platform, and means for supporting the coach body so that the floor and platform thereof are virtually on a level with the ordinary curb.

764,270. Vehicle tire. William P. Cronin, Boston, Mass., assignor to the Diamond Rubber Company, Akron, Ohio, a corporation of West Virginia. Filed March 21, 1904. Serial No. 199,058. (No model.)

Claim.—The combination of a wheel felly and a two part rim resting thereon and secured thereto consisting of one member having a curled edge for engagement with the bead of the tire, and having an inwardly extending flange which is arranged to engage upon one side of the felly, and a plurality of segmental plates having curled edges arranged to take over the other bead of the tire and having plate portions which are arranged to be clamped against said flange, all of said plates being adapted to form a ring.

764,282. Battery cell. William O. Duntley, Chicago, Ill. Filed February 15, 1904. Serial No. 193,611. (No model.)

Claim.—1. A battery cell having a bottom opening, a closure therefor independent of the battery elements, and means for passing a cleansing fluid through the cell to wash it out through said opening; substantially as described.

764,325. Double brake for vehicles. Alexander Winton, Cleveland, Ohio. Filed June 1, 1903. Serial No. 159,639. (No model.)

Claim.—1. In a vehicle brake, the combination of a vehicle body, a vehicle wheel provided with a concentrically arranged braking flange at its inner side, braking bands located at opposite sides of the said flange, a laterally projecting member connected with the vehicle body and held against movement, an operating member carried by the stationary member and operatively connected with the outer band, and an independent operating member located at the position, of mechanism, intermediate the shuttle boxes and the filling detector mechanism, which is operated when the shuttle boxes are shifting, to render the feeler of the filling detector mechanism inoperative, substantially as shown and described.

764,396. Lamp. Edward E. Taylor, Amesbury, and Clarence P. Leonard, Chelsea, Mass., assignors to Gray & Davis, Amesbury, Mass. Filed December 29, 1903. Serial No. 187,028. (No model.)

Claim.—1. A vehicle lamp comprising a frusto-conoidal shaped shell forming a body portion having an opening at its top, a gas chamber attached directly to the shell and provided with a tubular stem for connection with a gas generator, a gas tube or duct extending from the chamber into the shell, a burner connected with said tube or duct, a shield spaced apart from the shell and covering the opening in the top, a wind deflector attached to the shell in front of the shield, a frusto-conical reflector arranged

in front of the burner, a lens located in front of the reflector and hinged to the shell, an apex portion hinged to the body of the shell in the rear of the burner, a concavo convex reflector arranged in the hinged portion of the shell, and the rear top and bottom of the shell being provided with a series of perforations for the circulation of air.

764,614. Explosive Engine. George F. Murphy, New York, N. Y. Filed May 28, 1903. Serial No. 159,060. (No model.)

Claim.—1. In an explosive engine, a cylinder having a dome shaped head, a piston in said cylinder, and a radially spraying fluid injector located centrally of said cylinder between the dome shaped head thereof and the piston, said injector being arranged to direct the fluid away from said piston and spread the same over and against the interior surface of the dome shaped cylinder head, whereby a thorough vaporization is effected.

764,626. Sparking Plug. Alphonse F. Pieper, Rochester, N. Y. Filed April 22, 1901. Serial No. 56,806. (No model.)

Claim.—1. In an electric sparking device, the combination with a metallic stem, of a shell composed of a more expansible metal arranged between the ends of the stem whereby the unequal expansion of the parts will cause the proximate ends of the stem and shell to approach each other and a refractory insulating material arranged between the stem and shell.

764,639. Vehicle Tire. George H. Sherman, Detroit, Mich. Filed May 13, 1903. Serial No. 156,924. (No model.)

Claim.—1. In an inflatable rubber tire, the combination, with the tire proper, non-stretchable in its base portion to prevent elongation in a circumferential direction, of a tire seat essentially flat and having a suitable flange at one edge, and a two part flange at the other, one part being fixed and narrow of diameter, and the other complementary part relatively wide of diameter, removable and contractible, and the contractible portion in gripping contact with a portion of the tire proper to effect non-creepling.

764,644. Variable Speed Transmission Gearing. Henry L. F. Trebert, Rochester, N. Y. Filed September 2, 1902. Serial No. 121,719. (No model.)

Claim.—1. In a variable speed gearing, the combination of a driving clutch member, a driven clutch member, a shaft having a movable double clutch block non-rotatable thereon, a pair of clutch pinions of different sizes loose on the shaft and with either of which said clutch block may engage, a support surrounding the shaft, a pair of connected pinions on said support meshing with both of said clutch pinions, a sleeve surrounding the shaft and driven by said driven clutch member, pinion means adapted to drive said connected pinions from said sleeve, releasable means for holding said support stationary, and means for shifting said clutch block.

764,646. Automobile. Charles W. Van Winkle, Farmington, Cal. Filed February 26, 1904. Serial No. 195,340. (No model.)

Claim.—1. In a device of the character described, the combination of an axle, a casing therefor, and means for driving said axle, yokes on the ends of said casing, female yokes pivotally receiving the same and each comprising two members clamped on the ends of said axle, a cup secured to said axle, a cog ball secured to said axle and being provided with axial grooves, cogs swivelled in and carried by said cup and having their opposite ends seated in and adapted to slide in said grooves, as and for the purpose set forth.

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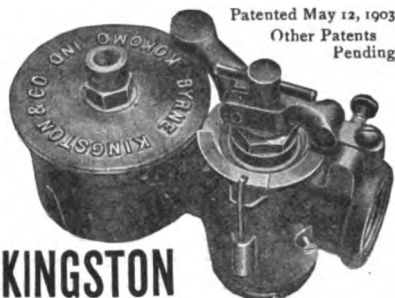
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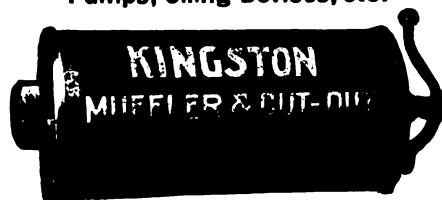
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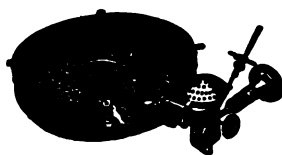


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The Motor World

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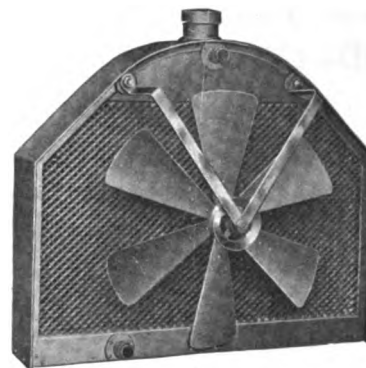
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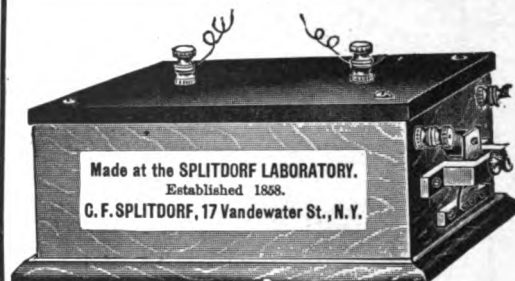
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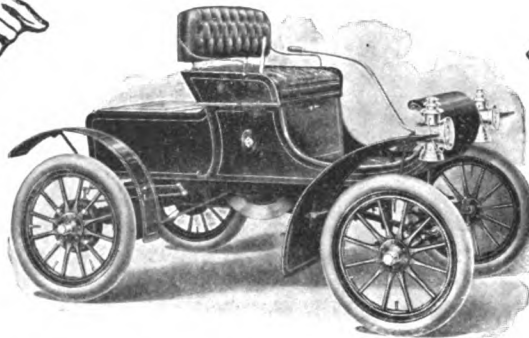


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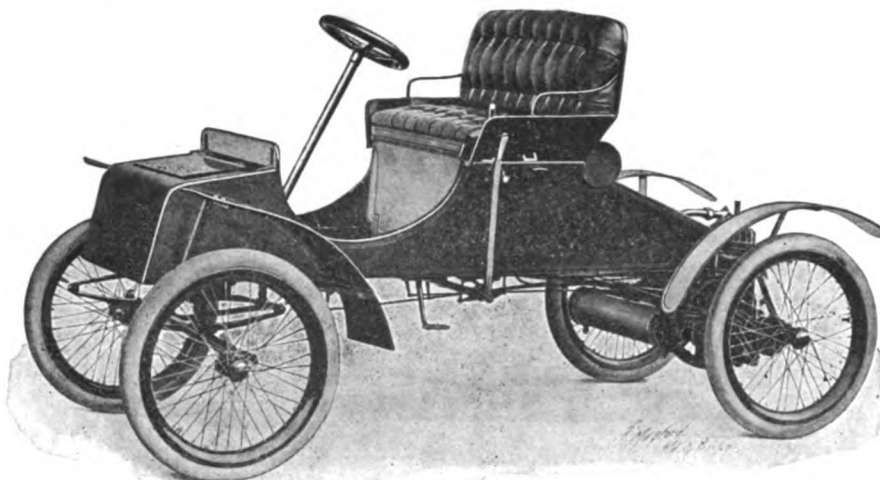
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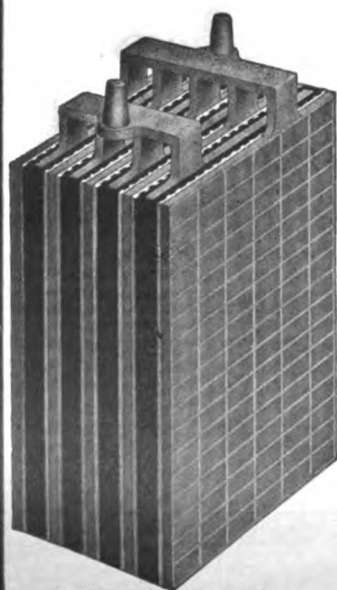
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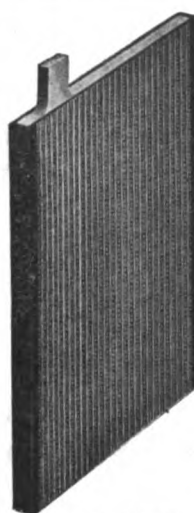
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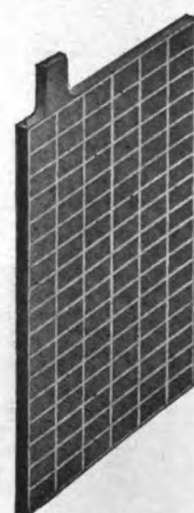
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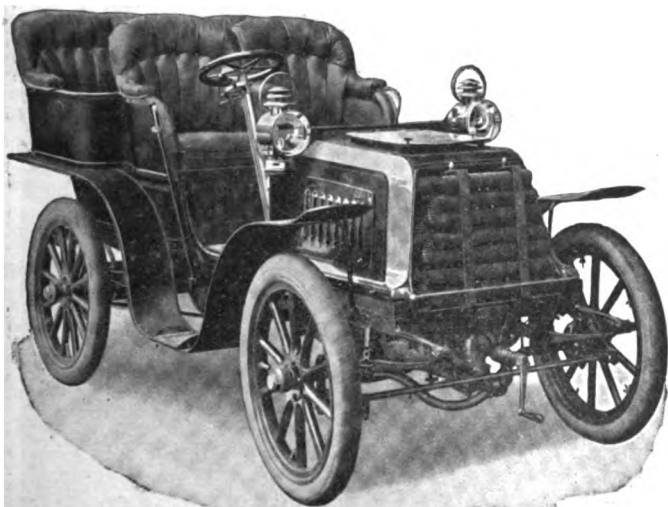
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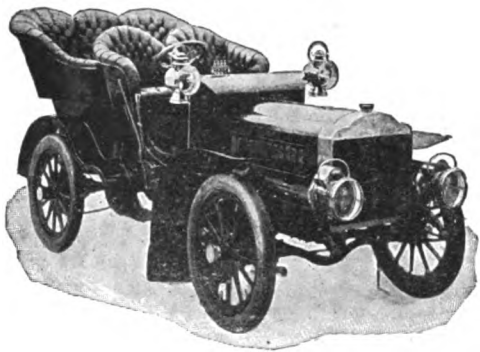
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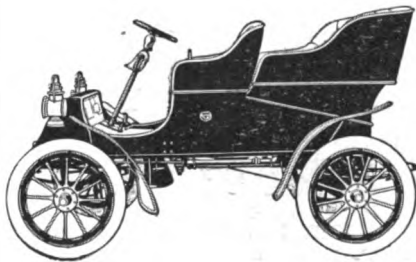
Painting, Repairing
and Remodeling.

Chassis Lengthened and Side Door Entrances a Specialty.

MOORE & MUNGER CO., 602 West 52nd St., New York City.

TELEPHONE, 4425 Columbus.

THE FORD



is an automobile with a reputation. We have proven our ability to make and sell for \$900 a car equal to any machine costing less than \$2,000.

What is more, THE FORD has stood the test of time and hard usage. The double opposed motor is the same type of engine used in the most expensive touring cars.

FOR THE PHYSICIAN and Business Man the reliability of the FORD is its strongest recommendation.

Its simple construction enables any member of the family to easily master the mechanism and to readily learn to operate it.

Write for catalogue and full particulars to

FORD MOTOR CO., Detroit, Mich.

THE CELEBRATED B & S Adjustable Automobile Wrench

still retains its ascendancy over all others.

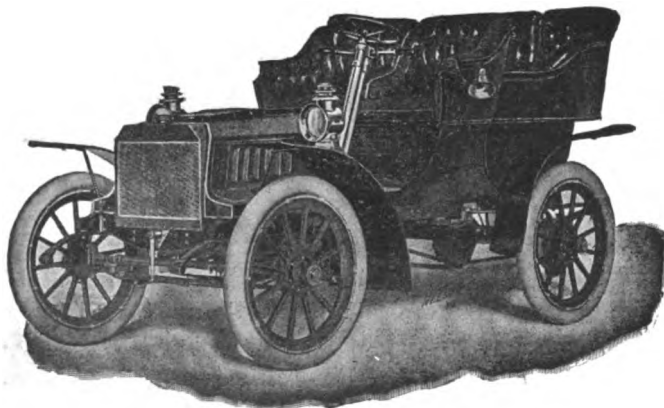
IT IS DROP FORGED THROUGHOUT AND CAREFULLY FINISHED.



See Circular A. Sent on request.

THE BILLINGS & STENCER CO., Hartford, Conn, U. S. A.

Pioneer Drop Forgers of America.



FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — **\$1,700** at the factory.

Two cylinder, horizontal, opposed motor in front.

Ball bearing transmission gear.

Wheel or lever steerer.

Divided front seat.

Automatic oiling of engine and other parts.

Gear drive.

Every part instantly accessible.

THE AUTOCAR COMPANY,
Ardmore, Pa.

BOOKLET.

Member of the Association of Licensed Automobile Manufacturers.

WARNING!

The following Manufacturers and Importers are licensed under the pioneer patent Number 549,160, granted to George B. Selden, dated November 5th, 1895, on

Gasolene Automobiles.

In view of their license agreement they and their agents will not sell, keep on hand or in any manner dispose of or deal in directly or indirectly any unlicensed new or second-hand gasolene vehicles, infringing said Selden patent.

MANUFACTURERS:

Electric Vehicle Co.
Whitson Motor Carriage Co.
Packard Motor Car Co.
Olds Motor Works.
Knox Automobile Co.
The Haynes-Apperson Co.
The Autocar Co.

The George N. Pierce Co.
Apperson Bros. Automobile Co.
Locomobile Co. of America.
The Peerless Motor Car Co.
Standard Motor Construction Co.
Waltham Manufacturing Co.
J. Stevens Arms & Tool Co.
H. H. Franklin Mfg. Co.

Pope Motor Car Co.
Smith & Mabley, Inc.
The Commercial Motor Co.
Berg Automobile Co.
Cadillac Automobile Co.
Northern Manufacturing Co.
Pope-Robinson Co.
The Kirk Manufacturing Co.

Elmore Manufacturing Co.
H. B. Thomas Motor Co.
Buffalo Gasolene Motor Co.
The F. B. Stearns Co.
Pope Manufacturing Co.
Sandusky Automobile Co.
Crest Manufacturing Co.
Studebaker Automobile Co.

IMPORTERS:

Smith & Mabley, Inc.
Central Automobile Co.

Alexander Fischer.
Hollander & Tangeman.

Standard Automobile Co.
E. B. Gallaher.

Auto Import Co.
F. A. LaRoche Co.

Sidney B. Bowman Automobile Co.

Both the basic Selden patent and more than 400 other patents owned by members of this Association will be enforced against infringers. Manufacturers, Importers, Dealers and Agents, also Users of unlicensed machines are liable.

ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS, - 7 East 42d Street, New York.

**TAKE A
KNOX WATERLESS CAR
TO THE MOUNTAINS**

and climb right up without let or hindrance. Knox does the trick. No overheating of engine—no water troubles—no worry—simply luxury in mountain touring.

BEST BY ROAD TEST.
Get Catalogue.
6 Styles Passenger.
6 Styles Commercial Cars.

Knox Automobile Co.,
Springfield, Mass.
Members Ass'n Licensed
Automobile Manufacturers.
*Selling Agencies in
all Principal Cities.*



THE TRIUMPH OF THE ELMORE PATHFINDER



**OVER 1000 MILES OF ROADS OF ALL SORTS IN ALL
KINDS OF WEATHER AND A REPAIR BILL OF 25 CENTS.**

Did any car of any size ever equal this record? This car made a mapping and routing tour from New York to St. Louis during weather conditions that delayed traffic, and its business was to investigate every road, find the bad places. A severer road test could not be made.

The lesson to be learned from this trip is that a small car costing \$850 that can accomplish these things is worth further investigation. Let us send you our book, "One Long Jump and Two Short Steps," and our new catalogue.

THE ELMORE MFG. COMPANY,

1104 AMANDA ST., CLYDE, OHIO.

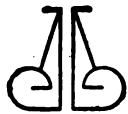
Members of the Association of Licensed Automobile Manufacturers.



Morgan & Wright Clincher Tires

are made a little stronger than is necessary for even the hardest roads.

LOOKS LIKE A GOOD TIRE, AND IS BETTER THAN IT LOOKS



MORGAN & WRIGHT, CHICAGO

New York

Dayton

Detroit

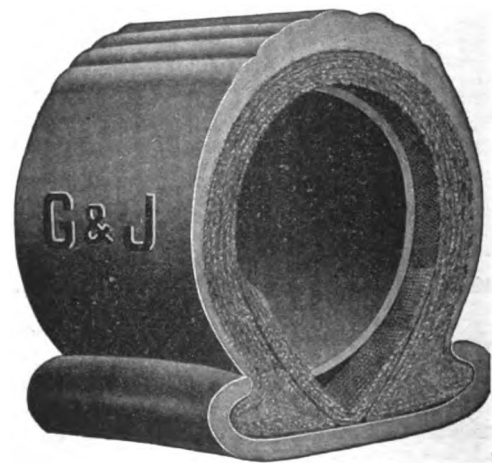
St. Louis

San Francisco

Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

THE PIONEER TIRE

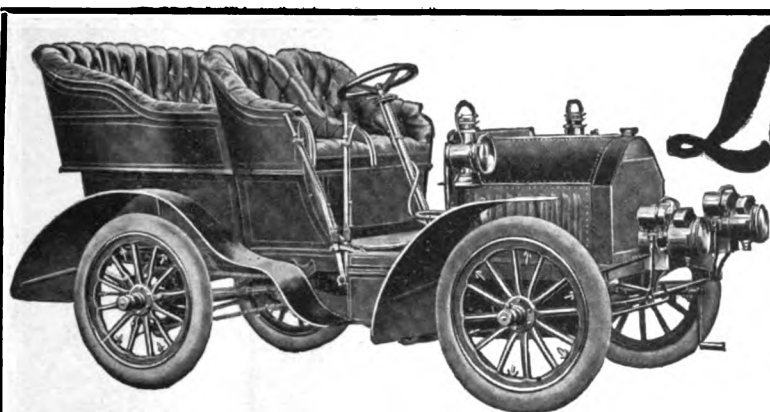
Experience counts in the making of automobile tires. We have been making G & J Clincher Tires for ten years, and know how to make tires that will give the best service. Use the genuine G & J tires and get the benefit of this experience. They are high grade, reliable tires.



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

G & J TIRE CO.

Main Office and Factory:
INDIANAPOLIS, IND.



Type C. \$2100 complete.

Locomobile GASOLENE TOURING CAR.

HAVE YOU BEEN DISAPPOINTED IN GETTING DELIVERY OF SOME OTHER MAKE?

If so, Communicate with us.

"EASILY THE BEST BUILT CAR IN AMERICA."

PRICES, \$2100 upwards.

The Locomobile Company of America, Bridgeport, Conn.

BRANCHES

NEW YORK, 76th St. and Broadway. CHICAGO, 1354 Michigan Ave.
PHILADELPHIA, 249 North Broad St. BOSTON, 15 Berkeley St.
Member Association of Licensed Automobile Manufacturers.



Hotel Lenox

Boylston and Exeter Streets
Back Bay, BOSTON

ONE OF THE FINEST MODERN
FIRE PROOF HOTELS IN THE
COUNTRY. TWO MINUTES'
WALK FROM THE BACK BAY
STATIONS, AND ONE BLOCK
FROM COPLEY SQUARE

CHARLES A. GLEASON, Manager
Send for illustrated booklet

HEALTH FOR YOU

flows out of the rocks at the
various medicinal springs at

FRENCH LICK-WEST BADEN SPRINGS

in the highlands of Southern Indiana. This
is the season of the year when a brief visit
there will restore the normal balance of your
system—renew appetite—put you in condition.

Outdoor and Indoor Recreations in plenty—Golf Playing New
Superb Hotel Accommodations.



Hotel Rates range from \$8 to \$35 per
week, including free use of
all the waters.

Booklet telling all about the waters and giving list of Hotels and
Boarding Houses, with their rates, sent free.

FRANK H. REED,
Gen. Pass. Agt., Chicago.

OHAS. H. ROCKWELL,
Traffic Man.

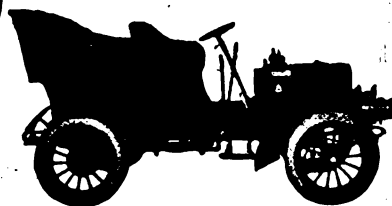
The YALE TOURING CAR \$1500.00

The Yale is a beautifully finished, roomy, luxurious family car at a moderate price. It is a happy medium between the ponderous "all motor" racing car and the noisy but inefficient run-about. It will do all the work asked of it, do it easily and is dependable. A comparison of the Yale with the other cars exhibited at the National Shows goes to show that in the Yale you can offer more for the money than in any other car made.

Send for catalogue and at the first opportunity examine a Yale.

THE KIRK MFG. COMPANY, 950 Oakwood Ave., Toledo, Ohio.

Members of the Association of Licensed Automobile Manufacturers.



Extract from the MOTOR AGE of June 11th, 1904:

"Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class.,'

This was a stock

Rambler

the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue "W" fully describes all models, and our booklet "A Little History" gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

THOMAS B. JEFFERY & COMPANY,
KENOSHA, WISCONSIN.

BRANCH HOUSES: { Chicago, 302-304 Wabash Avenue.
Boston, 145 Columbus Avenue.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, July 28, 1904.

No. 18

NEW YORK DEALERS IN UNITY

**Trade Association Smooths Friction Points and
Begins to do Things.**

Practical and effective work is now going on without any splurge under the auspices of the New-York Automobile Trade Association. The plan of holding meetings every week has proved a good one, and they have been well attended. This week the meeting was held on Wednesday night, in conjunction with a dinner at Healy's, and the business discussed afterward.

It was found that efforts to coerce members into the adoption of any plan looking toward uniformity was apt to result in dissensions, and so in the interests of harmony it was agreed that no resolution should be adopted by the association that would be of a compulsory nature. Proceeding on this basis, the association seems likely to accomplish considerable toward the establishment of uniform rates for supplies and services in regard to which there has hitherto been no co-operation. Some steps toward this end have been, in fact, already accomplished.

At a meeting held a fortnight ago the following list of questions was made up and a copy of the list sent to each member, with a request that he answer them:

What are your regular charges for:
Monthly storage of touring cars?
Monthly storage of gasoline runabouts?
Monthly storage of electric runabouts?
Monthly storage of electric broughams?
Monthly storage of commercial vehicles?
"Dead" storage of vehicles not in use?
Storage and washing for single day?
Single charge of electric vehicle?
Labor of mechanics an hour?
Labor of machinists an hour?
Labor of electricians an hour?
Use of machine tools an hour?
Towing machines to station?
Gasoline a gallon?
Ordinary machine oil a gallon?
Do you allow chauffeurs to repair machines on storage floors?
Do you allow chauffeurs to use your shop?
Is your telephone service free to chauffeurs?
Do you furnish lockers free to chauffeurs?
Have you any set regulations regarding demonstrations?

Is it advisable to restrict the limit of demonstrations?

Is it advisable to exact deposit for exceptional demonstrations?

Are you disposed to report the abuse of demonstration privileges?

If generally agreed, would you abstain from criticism of fellow members?

Would you report abuse of your credit for the protection of members?

Does your storage rate include lubrication of running gears?

Answers to these questions have been sent in gratifying numbers and explicitness, and they not only have revealed some interesting facts concerning trade charges, but have resulted in a beginning of the levelling process. The prices for storage, for instance, were found to be fairly uniform, and there was only one man charging less than the others for storing electric runabouts. He promptly said that he would raise his rate. He simply had not known before what was the prevailing rate. Similarly, in another matter, a couple of men found that their rates were not the same as the majority, and they agreed that they would change them accordingly. The members have come to appreciate the fact that by thus comparing notes uniformity of prices will eventually work itself out without any compulsory resolutions by the association, simply because the law of competition makes it foolish business in most cases for a man to charge more or less than the prevailing rate. The price of gasoline was found to be more nearly uniform among the dealers than anything else. The biggest variations were found in the charges for mechanics' work and for machine oil. The price for labor varied from 60 cents to \$1 an hour, while the charges for lubricating oil ran all the way from 45 cents to \$1.25 a gallon. Upon comparing notes of these things the members have begun voluntarily to adjust their prices.

Another question that is under consideration, and which will be treated in the same way of letting the members act voluntarily, is the old troublesome one of commissions to chauffeurs. The conditions under which commissions are allowed and the percentages are to be tabulated and set before the members for their consideration and guidance.

Still another important action, and one that has direct bearing on the question of chauffeurs' fees, has been taken by the association in the formation of a bureau of registration and employment for chauffeurs, in which there will be no charge either for getting a man a position or supplying a man with a chauffeur.

GUIDE TO LICENSED CARS

**Handsome Handbook with Summary of A.L.A.M.
Products Issued for Free Distribution.**

A compendium of gasoline automobiles and sort of guide book, such as the automobile trade and probably no other industry has seen before is now in press, and will very shortly be given a large circulation.

It is a book of the sort that is made possible only by the existence of an organization such as the Association of Licensed Automobile Manufacturers, by whom it is published. The scope of the work is, of course, kept within the confines of the association membership, and does not include the outside makers of gasoline automobiles nor the manufacturers of steam and electric vehicles, but, as a publication of the A. L. A. M., it is a very comprehensive manual.

The preparation of this book has been going on for some time, and the work has been kept quiet, but a dummy copy came into the hands of a Motor World man by chance, and investigation brought to light the particulars concerning it.

In one sense it may be said to be an epitome of the catalogues of the twenty-eight manufacturers in the A. L. A. M., a summary of all the cars produced under the Selden license, and yet it is not a catalogue, for it has no descriptive matter, no claims of merit for the various cars, no words of praise or salesmanship. It gives succinctly the specifications concerning each car, all of them, and yet in the briefest possible manner. It is a statistical product that must be immensely valuable as a work of reference. By turning its leaves the intending purchaser, the agent or the man seeking information can get quickly and without any trimmings of verbiage all the essential details concerning any licensed car on the market.

It is a handsome booklet of 85 pages, 5¼x8 inches, bound in heavy cartridge paper of dark green, with square back and old gold lettering. On the cover is simply:

"Hand Book of Gasoline Automobiles. For

the information of the public who are interested in their manufacture and use."

At the bottom of the cover page is the imprint of the Association of Licensed Automobile Manufacturers, No. 7 East Forty-second street, New York.

Inside, on the flyleaf, is the list of all the members of the A. L. A. M., and some leading importers, and above the list is this statement: "The following manufacturers and importers are licensed under the basic patent, No. 549,160, granted to George B. Selden, dated November 5, 1895, and are the owners of 400 other patents on gasoline automobiles."

Following this is the following "announcement":

"This 'Hand Book' is issued primarily for convenience and information to the prospective purchaser of an automobile. The products of the principal manufacturers throughout the United States of America and the importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto printed in red ink. The questions being uniform, the ease of comparison is obvious, and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste or the means at his command.

"It is believed by the several manufacturers who have united in producing this publication that this disinterested method of placing before the purchaser this means of comparison will be found of great advantage.

"Each manufacturer or importer conducts his business entirely independent of the other, and, of course, in open competition, but the recognition by the companies represented herein of the basic patent No. 549,160, granted to George B. Selden, November 5, 1895, on gasoline automobiles (which controls broadly all gasoline automobiles which are accepted as commercially practical), is a guarantee that a purchase through the several companies herein represented, or through their agents, secures to the purchaser freedom from annoyance and expense of litigation because of infringement of this patent.

"Catalogues of the individual makers, giving further details, should be obtained of the agent in your vicinity, or can be had by addressing any of the companies represented in this book on the inclosed 'catalogue request slip' which accompanies this book."

Next there is an alphabetical index to the various machines, of which the specifications are given in the book.

Each manufacturer has a page for each of his cars, and each page is a masterly product of the printer's art, and of condensed information. The name of the manufacturer and his address appears on a line running across the top of the page in small but plain light-faced type. Beneath, taking up half the page, is a half-tone illustration of the car. The cuts are superb ones, and reproduce

beautifully on the heavy coated paper. Alongside of the cut is the price of the car, with and without top, or with and without tonneau. The information is beneath, arranged in a double column on the page, the query part to the left of the color mark being in black ink and the specifications or answers in red ink. For instance, the dummy seen showed the page devoted to the Pierce Arrow, and the brevity of the scheme is shown by the following transcript of that sample page:

Price with top: \$4250. Without top: \$3000.
Model: GREAT ARROW
Other Models same Chassis:
Body: King of Belgium, Aluminum.
Total weight: 2500 pounds.
Wheel base: 93 inches.
Wheel gauge: 56 inches.
Wheel diameter: 34 inches.
Tires: Double tube, clincher type, Goodrich make, 4 inches diameter.
Steering: Wheel.
Brakes: Hand lever on both back wheels, foot lever on drive shaft.
Gasoline: 15 gallons.
For mileage of 100 miles.
Body suspension: 1/2 elliptic springs.
Frame: Pressed steel frame.
Touring car: for five persons.
Power: 24-28 horse-power.
Engine: 4-cylinder.
Arranged separate and vertical in front.
Cylinder diameter: 3 1/2-16 inches; stroke, 4 3/4 inches.
Cooling: Water, cellular radiator.
Control: Automatic throttle governor and spark.
Ignition: Commutator, storage batteries.
Drive: Bevel gear.
Transmission: Sliding gears.
Speeds: Three forward and one reverse.
Clutch: Cone.

What makes this publication most notable and interesting is that it is the product of co-operation, and will be circulated practically free. Any one may get a copy by sending the amount of postage for it, six cents, to the Association of Licensed Automobile Manufacturers, 7 East Forty-second street, New York. Apart from this, it will be circulated by the manufacturers and their agents. Each manufacturer will get a certain number of copies, in proportion to the number of pages he has in the book, and agents also will receive copies direct from the A. L. A. M., to whom the general distribution will be confined, for the book, is one that costs 35 cents apiece in quantity. As the book is such a valuable one for reference, so handsome and free from advertising of any sort and free from display type, a considerable circulation for it is expected to be obtained among social clubs, several having, in fact, already applied for copies. The first edition of this novel book will be about 25,000 copies. It will be revised by next January, so as to exploit the 1905 models and be kept in circulation.

The Week's Incorporations.

Milwaukee, Wis.—Merkel Motor Co., under Wisconsin laws, with \$200,000 capital, to manufacture and deal in all kinds of motors, motor vehicles, etc. Incorporators: A. B. Ferdinand, Joseph F. Merkel and W. J. Merkel.

New York, N. Y.—Motor Vehicle Transportation and Delivery Co., under New York laws, with \$10,000 capital, to manufacture motor vehicles. Incorporators: B. R. Ruckert, C. Schmitt and C. R. Smith.

SUIT OVER HORSE POWER

Buyer Begins Action Against Local Dealer, Alleging Misrepresentation—Denial by Latter.

One metropolitan firm has a lawsuit on its hands that is pregnant with huge and unpleasant possibilities for both dealers and makers. The fact that its status is purely local does not minimize the matter, although it does lessen its importance for the time being.

The suit was brought by the purchaser of a car which is usually referred to as developing 20 horsepower, although it really falls somewhat short of this. Still, it has been so advertised, and in general talk it is spoken of as a 20 horsepower car. In so doing, the dealer in question states, a practice very general in the trade is followed.

In the case of this car, however, the dealer added that he was very careful not to permit the impression to exist among purchasers that the car will actually develop 20 horsepower, and is so guaranteed. On the contrary, he says, he took pains to correctly inform anyone who appeared to be a likely purchaser. This was done in the case of the present suitor, who, it is claimed, is under no misapprehension in the matter, but who merely seeks to take advantage of a technicality.

"We shall fight the case to the end," said the dealer, "and I think we have at least a fair chance of coming out on top. But whether we do or not, we must fight it. Just think what it would mean if suit were brought against everybody who painted horsepower in a trifle more alluring terms than could be substantiated! Why, there wouldn't be a dealer along the row who would not have his hands full of suits. There would be no end to the litigation.

"Seriously, however, it merely shows the necessity of being careful in making claims. I have been afraid of trouble all the season, and have been particular myself and cautioned my salesmen to use similar care in the statements made to prospective purchasers. That is the reason I am so sure about this particular case."

Canadian Ford Company Organized.

It is announced that arrangements have been brought to a practical completion for the organization of a company, headed by Gordon McGregor, formerly manager of the Walkerville (Canada) Wagon Works, to build automobiles. Incorporation papers under Canadian laws will soon be filed, with a paid up capital of \$125,000. It is proposed to name it The Ford Motor Co., of Walkerville, as the well-known Detroit concern is understood to be heavily interested.

A building is being erected at Grand Rapids, Mich., to be used by J. K. Johnson as an automobile store.

MOTOR CARS FOR EXCURSIONS

Popularity of Them Increasing—1800 Taken Out in Electrics.

Without making much fuss about it, the automobile is gradually but steadily taking the place of stage coaches, trolleys and tally-hos for the use of large pleasure parties. Within the past few weeks several big excursions have gone out of New York City on automobiles. New York does not pay much attention to such affairs, but if anything of the sort had happened in a smaller city the papers would have carried extensive accounts of it. Even a few years ago, if there had been coaching parties anywhere nearly as large in New York as the automobile excursions that go out nowadays, the papers would have given much space to them; but hardly a line has been seen in the daily press about recent big turnouts in motor cars. It never was possible, in fact, for such big road excursions to go out in horse-drawn vehicles as now go skimming along in automobiles; there never were tally-hos nor coaches enough to carry them.

Last week there were 1,800 insurance men taken about New York City in automobiles, but no splurge was made about it. Two hundred motor vehicles were in use for the task, and they made a bigger parade than anything in the coaching line ever seen in the city. It was the occasion of the annual outing given by the Prudential Insurance Co., and the men who rode in the automobiles were agents of the company. The New York Transportation Co. got the job of carrying them, and all the vehicles used were electric. There were two big sight-seeing coaches of forty-passenger capacity each, five sixteen-passenger surreys, and dozens of victorias, broughams and hansom were pressed into service for the work. The excursionists were taken from the Fifth Avenue Hotel up through the park, along Riverside Drive and back to the hotel by a different route. The Transportation Company had to go two or three times after the load, but the whole 1,800 were handled satisfactorily. A couple of weeks before that the same concern took out six hundred members of the Hotel Men's Association and gave them a ride to Coney Island and back in electrics.

That neither of these affairs attracted any particular attention is attributable to the blase temperament of New York, yet they surely were indicative of the fact that the motor car is making its way, subtly yet surely, and withal rapidly.

Damage to the extent of about \$1,000 was caused to the establishment of James Nicholson, Troy, N. Y., last week. One automobile was destroyed, but several others stored there were rescued.

Dow! Dow! Who's Dow?

Different cities of the Middle West have been aroused to interest by inquiries concerning the facilities for running a large automobile factory in them.

Some of the letters are from New York and others are from Buffalo, but all are signed by F. Irving Dow. The Mayors of Grand Rapids, Mich., and of St. Joseph, Mo., have each received one of these communications from New York, while the Mayors of Bay City and Detroit, Mich., Moline and Springfield, Ill., and of Bellaire, W. Va., have received similar letters dated at Buffalo.

Mr. Dow writes:

"I represent a company which is looking for a location. This company has perfected a sixteen-horsepower, four-cylinder touring car, which is being placed on the market for \$1,600, and is meeting with a growing demand. This company will supply references as to its reliability should it seem probable that you can interest us."

He then names three conditions which must be satisfactory before the plant will be located anywhere. What these conditions are is indicated by the following three questions which he suggests should be answered:

1. Can the proper buildings be provided with a low rate of taxation?
2. Can plenty of help be secured with a minimum of danger of labor complications?
3. Are there good shipping facilities?

Good Thing From Ardmore in Prospect.

What is likely to be of much significance to agents generally is another big addition to the already much expanded Autocar plant at Ardmore, Pa. The latest increase is in the form of a brick building, 210 by 45 feet, of three stories and basement, and a further addition in the shape of a blacksmith shop, 75 by 60 feet, and of steel construction.

While, from its very start, the Autocar Company's product has been a decided success, the measure of which was enhanced last year by the addition of their powerful runabout at the somewhat startling price of \$900, their plans for the coming season include, if anything, a more eye-opening offering.

While particulars are not ripe, enough is known of them to make it safe to say that the Autocar line for 1905 will be one that will cause dealers everywhere to sit up and take notice quickly.

An alluring prospectus, in which its future is depicted in glowing colors, is being sent out to investment seekers by the Royal Automobile Company, of Chicago. The capital stock is stated to be \$250,000, full paid and non-assessable. It is added that the company owns its factory at Harvey, Ill., and controls the rights to patented improvements in electric and gasoline motor vehicles; no particulars of these vehicles are given, however, beyond general claims of their superiority. Subscriptions are asked for and blanks will be supplied by the secretary.

ROW OVER REPORT

Silver Medal Winners in White Mountain Tour Stormed and Committee Made New Awards.

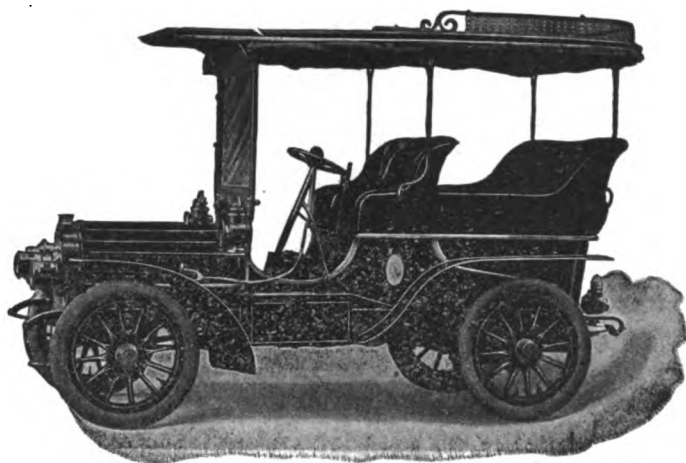
While it was known that there was some friction over the awards of gold medals to the cars which participated in the Mount Washington tour on July 14 and 15, the details of the story, and the storm which followed the giving out of the report, have just leaked out. It was known that there were two awards made—one of gold, silver and bronze medals, the other of gold and silver medals—the latter being styled the revised and corrected awards.

To a Motor World man a gentleman in a position to know all the circumstances stated the case thus:

"The awards were in the hands of the contest committee, composed of three persons. They submitted a report which had been agreed to unanimously. It was to the effect that gold medals should be given to eight cars which had made approximately perfect records; silver medals to seven cars which had met with minor mishaps, and a bronze medal to the sixteenth car which had not finished under its own power. This report was signed, sealed and delivered to the proper persons and the committee prepared to disperse.

"One of its members, who had been told that there would be a howl when the report was given out, said that he was going to leave on the 8:20 train—it was then 7 o'clock—and that it would not make much difference how much howling there was done after that. But he was mistaken, for the howling began even before he got away. As he was about to board his train one of the contestants—a silver medal winner—approached him and exclaimed that he did not want any silver medal. 'Neither does the committee,' retorted the member with a backbone as he stepped aboard his train.

"He was mistaken, however, in supposing that the report and his absence would end the matter. The silver medallists hunted up the remaining members, corralled them and reasoned with them to such purpose that they, as the majority of the committee, cancelled the report and made a new one. In the latter they awarded gold medals to all the contesting cars except one—the bronze medal winner. It was held that as not all the original gold medal winners had made perfect records, the other cars, which had met with only slight mishaps, were also entitled to gold medals. It was finally determined to give gold medals to each car which finished under its own power. That is why fifteen instead of eight gold medals must be paid for by Anderson & Price, the hotel-keepers, who financed the affair. It is also the reason the makers of the cars which made perfect records are now dissatisfied. They say they cannot see why cars which had troubles of various kinds should be ranked with them and given the highest award.



The 1904 Haynes

1904
Tonneau

TWO MODELS

1904 Light
Touring Car

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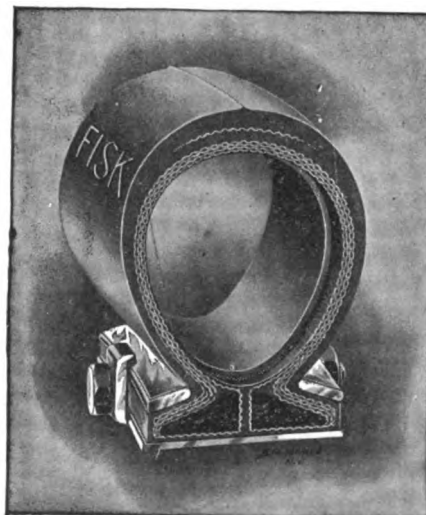
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NEW YORK, JULY 28, 1904

Looking After the Sales.

The days when cars sold themselves on reputation or appearance or price have passed, and at the present time it takes salesmanship of no mean order to convince customers that certain machines are the ones best suited to them. This fact is now pretty generally recognized, and the showroom is regarded as the battleground upon which victory will be achieved or defeat inflicted.

The successful proprietor or manager of a store is the man who realizes that the department of sales stands first in order of importance. Whatever happens, it is never permitted to deteriorate. Usually the proprietor is also a salesman. During busy times, or when a sale of unusual importance is hanging in the balance, he lends the weight of his personality to the selling forces. It would be better if he could spend all his

time on the floor, for he has a standing and influence with customers, due primarily to the fact that he is the responsible head of the establishment, that no mere salesman, no matter how expert, can have. But as it is impossible for him to do this, save to the entire neglect of the other departments of the business, the proper thing for him to do is to so arrange his time that he shall be on the floor at such hours as customers are most likely to be in evidence.

There are stores where a policy just the reverse of this is pursued. The head of the concern is rarely seen on the floor, and to the great majority of customers he is absolutely unknown. They transact their business with the salesman and the bookkeeper or cashier. Knotty or disputed questions are referred to him, but personally he never appears. If the salesmen are men of character and strength they supply the want fairly well, but at best there is always a feeling that something is lacking.

In stores of this kind the head is always out or engaged. There are others where he is always about, mingling with customers, saying a word here and a word there, passing on some disputed point and settling it without hesitation, giving, or seeming to give, his personal attention to details that appear to be trivial. There can be no two opinions as to which of the two varying heads is the better liked or the more valuable.

A Mischievous Technicality.

An interesting decision has been made by Judge W. S. Kellogg, of Westfield, Mass. He has ruled that the establishment of the ownership of an automobile by its registry number is not a sufficient identification of its occupants when charged with speeding. On this technicality eleven Springfield men charged with violating the speed law, by officers who had taken the numbers of the cars, were recently discharged.

This seems good law, and yet if it obtains it would to a considerable extent render the statute inoperative. A policeman who takes the number of an automobile and does not see the occupants of the car sufficiently well to recognize them again, should not be allowed to hale the owner to court and have him fined if the owner says he was not in the car at the time.

Of course, the person who was operating the car when it was exceeding the speed limit is liable if it could be learned from the owner who it was, but, as no "Canfield law" has

yet been passed to compel owners to tell to whom they lend their cars on certain days, it would be "up to" the police to identify the individual committing the offence.

While this seems fair enough as a legal technicality, law abiding automobilists can hardly rejoice at such a ruling, as it would be an invitation to reckless drivers to mask themselves and defy identification.

Room for All Types.

There are, even now, motorists who pin their faith to solid tires, just as there are pleasure cars shod with tires of the non-inflatable type. In each case they are so few in number as to be inconsiderable, but nevertheless they are to be found, and there seems to be no reason to doubt that they will continue to exist for an indefinite period, despite the overwhelming vogue of the pneumatic tire.

The ordinary user of a motor vehicle entertains the belief that, however important the tire question is, and how many varieties of tires there may be to select from, there is but one type to choose—i. e., an inflated tire of some sort. He does this notwithstanding the known limitations of the pneumatic tire and its high price, both in respect to initial cost and maintenance. He does not seek to minimize its disadvantages; instead, he looks them squarely in the face and reckons them as a part of the game; which, as a matter of fact, they are. The same desire for power and speed which most motorists plead guilty to is felt when it comes to tires. The ride literally on air is the crowning triumph of the automobile, and as indispensable from it in nearly all cases as is the vehicle itself.

At the same time, the few users of solid tires do not find them unbearable or even a pronounced or unmitigated evil. Most of them say that they are satisfied with the solid tires, finding that the chief bogle, vibration, is not unpleasantly prominent after the first ride or two, while the claims of economy made are fully borne out by the result.

It is a favorite practice to fit the rear, or driving wheels with solids, while continuing to use pneumatics on the front ones. Thus the wear and tear comes on the less vulnerable tire, and its longevity and reliability are very materially increased. Nor are the disadvantages which one would naturally look for in the shape of wear on the vehicle and discomfort to its occupants as pronounced as expected. In fact, there is a comfort that is really remarkable obtained from this hy-

brid, the solid rear and pneumatic front combinations.

It is generally acknowledged that for business vehicles, especially heavy ones, something cheaper and more serviceable and reliable than the pneumatic is imperatively demanded. But as regards pleasure vehicles the popular belief is equally strong that the air tire is the only one to use if comfort is to be considered. It is only by actual trial of the solid, or the solid and pneumatic in combination, that it is seen that there is some merit outside of the pneumatic.

There is an intermediate class of vehicle that seems tolerably certain to be mostly fitted with either the solid or the combination tire. We refer to vehicles—and particularly those used in transporting passengers—used in remote countries, especially such as are located in the tropics.

In the case of these all the objections to the air tire apply with double force. By the adoption of an intelligent system of springing vehicles fitted with solid or semi-solid tires can be made almost as comfortable as the ordinary car fitted with air tires. This fact is certain to become more generally known, and, while it will not affect the reign of the pneumatic tire, it will offer a substitute for it in cases where its use is out of the question.

Three Years' Progress.

Just a little less than three years ago the first regularly organized endurance run in this country was carried through with remarkable success, all things considered. There were no penalizations, no scoring by points, no system of espionage; instead, the cars were given their heads, so to speak, and bade godspeed on daily journeys, and checked at controls on a liberally arranged and elastic schedule. Of the starters about 30 per cent survived the five days' run and were proclaimed stanch and reliable cars.

This week the start was made in a tour which for more than a third of the way takes in the same section of country as the first endurance run just referred to—viz., from New York to Buffalo. It is to be a leisurely tour, with daily runs only slightly longer than those of 1901. But what a difference is there in the two journeys! If the one now being taken had been especially designed to draw a comparison it could not have been done more convincingly. On the first run the daily casualties were enormous on the first two days, when the weather was perfect, and still greater when the rain

turned the roads into quagmires. The present one is practically without a casualty list, and in place of a strenuous day and night struggle to bring cars through, with relays of workmen along the route and carloads of parts for replacement shipped ahead of the cars, the tourists of 1904 are taking things easy, in the calm confidence that bad roads and worse weather hold small terrors for them.

What the future holds in store is only to be surmised; but it may be assumed with certainty that as long as there are roads to be driven over the journey to St. Louis will be pursued, and that city reached in good order by a steadily increasing number of motorists.

Carrying Capacity of Cars.

In a vehicle like the automobile, where no great economy of either weight or space is necessary, it would be natural to look for ample provision for the carriage of baggage, tools and supplies and other impedimenta. Particularly is this true when it is remembered that the automobile's radius is large, and the demands for the articles referred to are correspondingly heavy.

It is a matter of common knowledge, however, that expectations of this sort are realized only in moderate degree. Practically all cars have facilities for carrying some of these articles. But any one who wishes to take along a full complement is obliged to devise some arrangement which will increase the baggage capacity to the required extent. Baskets of divers shapes and sizes, boxes for extra tools and similar articles, and auxiliary tanks for supplies are carried, and compartments are fitted for holding a spare tire or wraps of various kinds; and it is a growing practice to utilize the tops of canopies for the bestowal of grips or suit cases or even small steamer trunks.

The latter is an extreme case, applicable mainly to tourists; and it will be said, with considerable truth, that the inveterate tourist, the one who takes frequent long journeys, should provide himself with special appliances for the carriage of impedimenta of all kinds. He usually does this. Frequently he goes even further, and has his automobile body specially designed and built to suit his requirements. Indeed, most French motorists do this anyhow, whether they intend to use their car for touring or not. In this way they secure an arrangement entirely suited to their needs.

Anything of this kind is, of course, out of

the question with the ordinary car. But if designers will study the requirements of the average user and strive to meet them as far as can be done without adding too much to the weight, the bulk or the cost of the car, they will accomplish a good stroke of business.

Truly, things move in circles. It is suggested that in the forthcoming British small car trials no deductions be made for stoppages rendered necessary by tire troubles, and the matter is said to be receiving serious consideration.

There was a time when such a rule was in vogue in endurance contests in this country. But the day came when it was abrogated and the tires left to work out their own salvation, it being felt that to relieve them of penalizations was to place a premium on unreliability. If, by giving a car a black mark in consequence of its tires puncturing or otherwise going wrong, an incentive was given to produce a more reliable article, a great deal of good would be accomplished. Consequently, the non-penalization of tires was abolished and no great harm came of it.

Some motorists who use exceeding care in selecting the gasoline they use to see that it is of the proper density pay no heed to its delivery to the tank. They will pour it into the tank without thinking of straining it or caring what deleterious substances find their way ultimately to the carburetter.

The best plan is to use a funnel fitted with a piece of wire gauze. This catches any impurities the gasoline may contain, and so avoids subsequent trouble. Such funnels are used in most up to date garages, and can be readily procured by the ordinary motorist at a small advance in price. At a pinch the gauze can be fitted and soldered to an ordinary funnel.

In the never-ending struggle that seems destined to be waged between the extremists—the motorists on one hand and the reckless, inconsiderate "scorcher"—the great body of moderates are tempted to exclaim, "A plague on both their houses." If some way could be found of dealing with the latter the former could be regarded with extreme indifference. But one furnishes the second with a constant supply of ammunition, which the other is always ready to use. The result is that all motorists are made to suffer for the ill deeds of a few, and the pastime itself is brought into disrepute.

ON THE ROAD TO ST. LOUIS

Tourists on the A. A. A. Run Having Joys and Troubles—Narrow Escapes but Few Quit—They Protest to Governor Odell.

Gaining strength and volume as it rolls along, like a snowball on a hill, the much heralded (no pun intended) tour of the American Automobile Association to St. Louis is now on. In spite of all efforts and "slathers" of press notices, it did not prove a big affair, though interesting it undeniably is. Only thirteen regularly entered tourists were on hand at the starting place on time last Monday morning. Two more arrived within an hour, another started in the afternoon, and still another left on Tuesday morning and got to Albany that same night. All of the sixteen who left New York Monday got to Poughkeepsie that night, and all except one reached Albany on Tuesday, the lost one being replaced, however, by the man who made the whole run to Albany that day. At Albany the New Yorkers were joined by eleven tourists from Boston and other points in New England, so that on Wednesday the touring caravan had attained the respectable proportions of twenty-seven bound for Utica, between which city and Syracuse the tour is proceeding as the Motor World goes to press, with prospects of its growing larger all the time, not only by the addition of the entries in hand at the start, but also by the addition of new entries that are being received as the run progresses.

The start from New York was made on Monday morning under a clearing sky, in which the sun played at hide and seek with drifting clouds. The starting hour was 9 o'clock, and the place in front of the Automobile Club of America, at Fifty-eighth street and Fifth avenue, but Augustus Post, chairman of the tour committee, and several others were on hand half an hour ahead of time. A few of the first arrivals had on their storm coats, for it had rained all night and was not yet clear, but these soon gave way to linen dusters as the sunshine increased in strength.

The participants arrived singly, and took their places anywhere they could find room around the four corners. For the most part the cars did not convey the suggestion that they were bound for a long tour, though the majority of them carried extra tires in plain sight; neither did the tourists appear bound for a two-weeks' run. There was a notable absence of fuss and display of elaborate and striking costumes. There was no confusion and yet no orderliness. There was no schedule to be lived up to, and so no haste. The officials moved about placidly, giving their numbers and badges to those who had not received them before, and checking up the cars and persons ready to start. Every one was told to wait until Mr. Post started and then fall into line. This was done. Mr. Post sat up in his car from 8:45 till 9:25 waiting for



D. B. HUSS, AN ENGLISH OLDSMOBILE MEDAL WINNER, IN AN OLDS TONNEAU.

all details to be settled, and then he pulled out and the others followed indiscriminately, getting off any time the traffic on the avenue



WINDSOR T. WHITE IS INTERESTED IN HIS CAMERA. CARL PAGE (WHITE) AT LEFT.

permitted. There was no ceremony, no formalities, no fluttering of flags nor bugle note attending the departure. It was quiet and unostentatious. The tourists and the dozen



SECRETARY C. H. GILLETTE AT THE WHEEL OF A POPE-HARTFORD.

or so of escorting cars simply slipped from their moorings near the curbstones and mingled with the heterogeneous traffic of Fifth avenue, and were lost to view.

Together with those who were on hand to see them off, the tourists made quite a display at the Central Park Plaza, where they assembled for the start, and quite a crowd collected. Chairman Post ranged his White touring car at the south curb of Fifty-eighth street, on the west side of Fifth avenue, in front of the Vanderbilt mansion, and Webb Jay, Carl Page and Ray D. Lillibridge, all in White cars, stationed themselves behind and alongside, so as to provoke the comment from several that it was quite a White demonstration. Others stood on Fifty-eighth street, east of Fifth avenue, and along Fifth avenue, tying on their numbers and looking over their equipment, while photographers in shoals went about snapping and posing persons for time exposures. Windsor T. White, who entered the car driven by Carl Page, was about taking pictures with a small hand camera, and the Motor World man took a snapshot at him while he was peering into the camera box to see what was the matter with the water feed pump, or the air pressure, or something. Mr. White went only a little way up the river and then took a train for Cleveland. Nearly all the machines on hand were touring cars, but Secretary C. H. Gillette of the A. A. A. was one of the exceptions, he having removed the tonneau from his Pope-Hartford.

Most of the escorting cars—there were about a dozen of them—arrived late. A. L. Riker, with Mrs. Riker, in a new Locomobile, was one of the early arrivals, though, and Mrs. Riker shared the attention of the photographers with Miss Lillibridge, who sat in her father's car and was the only other woman in a car who offered a target for the cameras. Mrs. Gillette kept out of her car during the waiting.

Just before he left, Mr. Post received a telegram from Boston stating that the New England division of the tour had left there at 7 o'clock, and would join the New Yorkers at Albany. With a couple of post entries, there were sixty-one enlisted for the tour, and a dispatch from Chicago, received by the committee while at the post, announced that five more entries had been made there.

Two cars in which much interest centred arrived just as the others were disappearing up Fifth avenue. These were the new Peerless racer of 70 horsepower, built for Harlan W. Whipple, president of the American Automobile Association, and the 20 horsepower Darracq of F. A. La Roche. The former must make the trip to St. Louis in order to be accepted by Mr. Whipple. Mr. La Roche started to make the trip through to St. Louis in three days without having his engine stop. He started at 9:44 o'clock, the car carrying his alternate as a driver, Alexander Le Blanc, and an official observer, Norris Mason, besides Lee Strauss as passenger and himself. Messrs. Le Blanc and La Roche will relieve each other at driving, one resting

by travelling on a train and picking up the other about every twelve hours. Mr. Mason, the observer, will be similarly relieved by H. H. Everett. If the outward trip is successful, it is possible that Mr. La Roche will attempt the return journey.

Those who started on Monday were:

No. 3—C. H. Gillette, secretary of the American Automobile Association, 10 horsepower Pope-Hartford; Mrs. Gillette as passenger; car had tonneau removed.

No. 4—Carl Page, New York, 10 horsepower White touring car; M. R. Greene, mechanic; Windsor T. White and M. H. Newton, passengers.

No. 10—Augustus Post, chairman A. A. A. tour committee, 10 horsepower White touring car; J. R. Thompson, mechanic.

No. 14—R. P. Wauson, Baltimore, 70 horsepower special Peerless (built for H. W. Whipple); George Behrens, mechanic; R. P. Scott, C. S. Scott and George B. Adams, passengers.

No. 24—C. W. Burchard, 12 horsepower Haynes-Apperson; George H. Kaufman, passenger.

No. 31—Ray D. Lillibridge, 10 horsepower White; W. E. Sonnastine, mechanic; Miss Laura Lillibridge, passenger.

No. 32—Webb Jay, 10 horsepower White; C. E. Dinser, mechanic.

No. 34—Percy F. Megargle, 8 horsepower Elmore, R. G. Megargle, passenger.

No. 42—F. A. La Roche, 20 horsepower Darracq; Norris Mason, A. Le Blanc and Lee Strauss, passengers.

No. 47—H. C. Esseltyn, 10 horsepower Franklin; J. H. Gerrie and G. J. Bradley, passengers.

No. 53—D. B. Huss, 10 horsepower Oldsmobile; F. Edward Spooner, passenger.

No. 58—B. C. Swinehart, 16 horsepower Yale; A. Lazarnick, passenger.

No. 59—George Soules, 24 horsepower Pope-Toledo; Albert L. Pope and Arthur Pope, passengers.

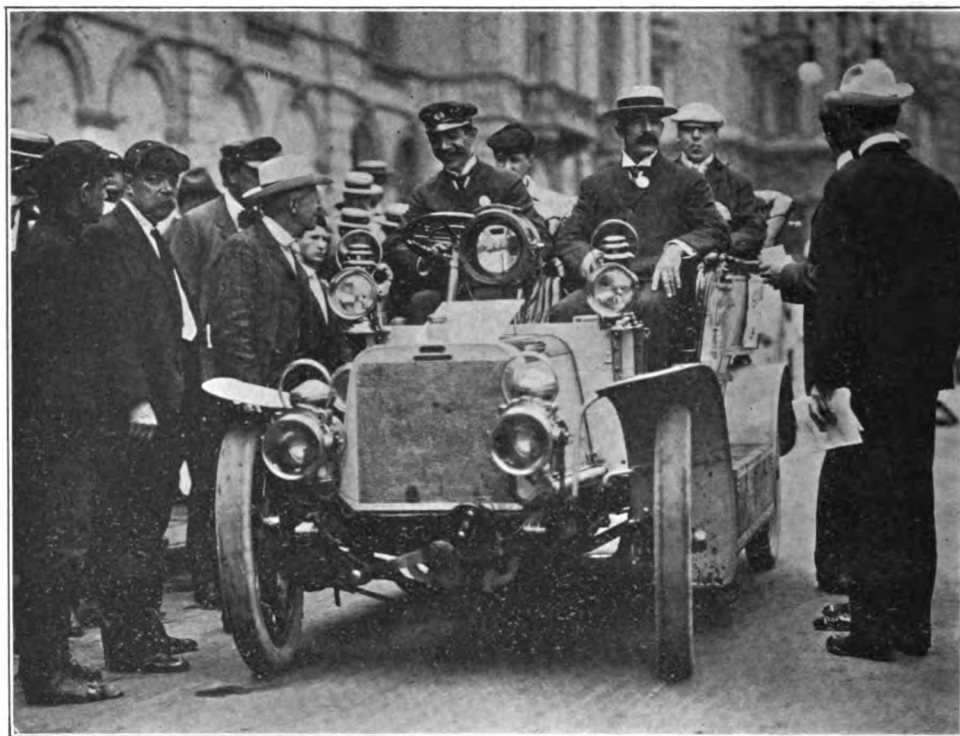
No. 60—A. J. Seaton, 15 horsepower Buckmobile; J. W. Seaton, passenger.

No. 61—A. D. McLachlan, 20 horsepower Royal; A. C. Miller, mechanic; George H. Bowler, passenger.

No. 38—W. C. Hurlburt, 8½ horsepower Cadillac.

The first fifteen of these started on Monday morning, and Mr. Hurlburt on Monday afternoon. On Tuesday morning J. M. Waters, No. 50, started in his 24 horsepower Panhard. Mr. Hurlburt caught the party at Poughkeepsie, and Mr. Waters caught them at Albany.

Others who were scheduled to start with the New-York contingent, but did not get away on Monday, were No. 33, C. Eugene Hale, 16 horsepower Knox; Dr. M. J. Morton, 12½ horsepower Autocar; Mrs. Susan Drake Malpass, 24 horsepower Panhard, and A. B. Pendleton, No. 37, 24 horsepower Pope-Toledo. Mr. Pendleton, when the tour started, was still on his way to New York from St. Louis, and was expected to turn and join the tourists wherever he fell in with them.



F. A. LA ROCHE IN HIS NON-STOP DARRACQ FINDS CAUSE FOR SMILES.

Some of those who acted as escorts from New York were Mr. and Mrs. A. L. Riker, in a Locomobile; R. Lee Morrill, in a Locomobile; L. A. Hopkins, in a Haynes-Apperson; Sidney Maddock and F. G. Webb, in a Winton; Frank Nutt in a Haynes-Apperson; John F. Plummer, in a Locomobile; A. J. Picard, in a Darracq; H. Levick, in a Napier; J. Barto, in a Haynes-Apperson, and A. E. Ranney, in a Matheson.

The schedule of the run, showing the daily distances and the night stops, is as follows:

Date.	Stop.	Miles.
Monday, July 25.....	Poughkeepsie	76
Tuesday, July 26.....	Albany, N. Y.....	74
Wednesday, July 27.....	Utica	100
Thursday, July 28.....	Syracuse	49
Friday, July 29.....	Rochester	82
Saturday, July 30.....	Buffalo	73
Monday, August 1.....	Erie, Pa.....	94
Tuesday, August 2.....	Cleveland, Ohio.....	110
Wednesday, August 3.....	Toledo	113
Thursday, August 4.....	Waterloo, Ind.....	93
Friday, August 5.....	South Bend.....	16
Saturday, August 6.....	Chicago	102
Monday, August 8.....	Pontiac	91
Tuesday, August 9.....	Springfield	94
Wednesday, August 10.....	St. Louis.....	91

The various tire companies are taking a lively interest in the tour, most of them having men following the tourists by train and making the night stops with them. G. J. Bradley is along representing the Diamond Rubber Co.; Harry Sheldon is representing the B. F. Goodrich Rubber Co., while the G. & J. Tire Co. has three men along—Herbert A. Githens, Arthur T. Smith and W. G. Whitlock.

Boston, July 25.—The Boston contingent of the American Automobile Association's St. Louis run left the clubhouse of the Massachusetts Automobile Club to-day. A half dozen machines started on the long ride of nearly fourteen hundred miles to the exposition city. At the head of the procession

was H. W. Whipple, president of the A. A. A., and Mrs. Whipple, in their Mercedes car. Elliott C. Lee, president of the Massachusetts Automobile Club, was in his White steamer. Charles J. Glidden and Mrs. Glidden were in their big Napier car, with which they have already toured more than sixteen thousand miles in Europe. Fourth was H. F. Lesh, in a Pope-Toledo touring car. A few minutes later George H. Lowe, in a White steamer, and Percy P. Pierce, in the Pierce Arrow that climbed Mount Washington, started on the route. Besides starting on the St. Louis trip, Mr. and Mrs. Glidden made their start this morning on a tour around the world.

Springfield, Mass., July 25.—The close of the first day of the A. A. A. tour for the New England contingent found nine tourists quartered here for the night. Six of these were those who started from Boston this morning. The other three, who joined at various places, were: No. 39, F. M. Manross, Bristol, Conn., 24 horsepower Columbia; No. 46, George Otis Draper, Hopedale, Mass., 24 horsepower Packard, and F. W. Richards, Boston, 10 horsepower Phelps.

Poughkeepsie, N. Y., July 25.—Sixteen cars left New-York to-day and sixteen reached Poughkeepsie. No record is being maintained of starting and finishing times, as scorching is not to be encouraged on the run in this way. The tourists, most of them, have decided to make this a pleasure run, and will not be beguiled out of their easygoing way by any one. The run up to Poughkeepsie was pleasant, the roads being in excellent shape after the rain. The lack of dust was appreciated, and as the mud was not at all bad nor hard to pass through, the tourists came into Poughkeepsie clean and



THE WHITE SQUADRON READY FOR THE WORD. CHAIRMAN POST IN FRONT.

orderly appearing. The cars also were clean, for the mud did not throw.

The last car to reach here to-night was the special Peerless of Harlan W. Whipple, which is being driven to St. Louis by the Scott Iron Works, of Baltimore, for delivery to Mr. Whipple. The big touring car was handled easily even on the slippery roads, going up the hills handily. The belt to the fan was too small, and there was some slipping, which caused trouble, but this has now been remedied. The first car to reach Poughkeepsie was the Pope-Toledo, driven by George Soules, driver of the winning car in the endurance run last year. A. L. Pope and A. W. Pope are passengers in this car. The first car to reach Peekskill, the noon stop, was the White driven by Ray D. Lillibridge, but there is as much honor due on this tour to the car which arrived last as to the first, for there is no honor in scorching.

Of incidents en route to Poughkeepsie there were, of course, a few. B. Clifford Swinehart, in a Yale, fitted with solid tires, struck a dog, which caused the breakage of the stop cock on the carburetter and a bad leakage of gasoline. The dog was uninjured. Dwight Huss, driving the Olds tonneau, was struck in the rear wheel by an old blind dog which steered his course into the rear wheel. An indignant farmer wanted to cause trouble, and might have done so if he had a gun with which to pot the men of the devil wagon. The failure of the committee to provide confetti for the pilot wagon from Peekskill, the noon stop, to Poughkeepsie, caused many of the cars to take a wrong route.

The A. A. A. officials accompanying the run, Chairman Augustus Post, Secretary C.

H. Gillette, A. B. Tucker and M. L. Downs, are in constant receipt of telegrams making entries from points further West. Thus far the expected camp followers, men who vowed they would not pay the entry fee because they saw no reason for doing so, have not made their appearance.

F. A. La Roche, in the Daracq on a non-stop run, reached here at 3:15 p. m., and went right on. He struck a trolley car at Yonkers, but the trolley, and not the automobile, received the damage from the impact and the engine did not stop.

Albany, N. Y., July 26.—There are constant additions to the touring party, and twenty-seven cars are now here with the main line body. Eleven came from New England points, and another was added from New York to-day, one being also lost temporarily. J. H. Waters made the run of 150 miles from New York in his 24 horsepower Panhard in 12 hours and 35 minutes to-day to join the main line group. B. Clifford Swinehart dropped out through the carelessness of a mechanic, who left a tool in such a position that it broke his engine. He shipped the car to Toledo, and expects another in two days to replace it, so that he may continue the trip. The accident happened near Hudson.

The New Yorkers left Poughkeepsie this morning, most of them at 8 o'clock, and did not stop at Hudson for dinner, except in a few instances, coming right through in from four to five hours, over ideal roads. The roads were dusty after leaving Hudson, this being the first dust encountered. The participants in the run are touring, not racing, and they drop off for a rest whenever they see

fit. To-day several White cars with jolly parties abroad, travelling together, spied two pretty girls in an orchard, dubbed the place the Garden of Eden, and to-night they told of fine apples gathered there.

The Bostonians had hard work going right through from Boston. Six cars left Beantown, and five more joined en route. Rain fell, and the roads were muddy up to fifteen miles from Springfield, when they became good. To-day rain fell again, and the roads were, of course, much up and down from Pittsfield. The Taconic Mountains provided climbing for some who went over the mountains and coasted down a road with terrific "thank-ye-mums." Others went around and, after miles of climbing, enjoyed an ideal three-mile coast, winding in and out among the hills in what one termed a heavenly manner after all the hard climbing.

Percy Pierce, in the Great Arrow, was first of the party to arrive, with E. J. Towle as a passenger and George Ullrich, mechanic. Then followed in rapid succession Mr. and Mrs. Charles J. Glidden, in their Napier car, with Charles Thomas as engineer; Mr. and Mrs. Harlan W. Whipple, with Charlie Donhue as engineer, in a 40 horsepower Mercedes; F. N. Manross, Robert Manross, Hobart Warner and Dr. W. W. Horton, in a 24 horsepower Columbia; Mr. and Mrs. H. F. Lesh, Mrs. Camp and J. L. Darling, driver, in a 24 horsepower Pope-Toledo; Mr. and Mrs. F. W. Richards and Walter Killam, in a Phelps; Harold Pope, driving alone in a Pope-Hartford; Geo. H. Lowe, W. C. Reynolds and Walter Schmunk, in a White steamer; George Otis Draper and Joe Henderson, mechanic, in a 24 horsepower Packard; Elliott C. Lee, in a White steamer, and W. C. Russell, in a Stanley steamer.

Of incidents of the day's run of the two parties there are several. Ray Lillibridge stopped his White car five miles from Hudson and picked up a man who had cut off his finger in a machine. The five miles to the hospital was made in record time. Albert Pope ran over two dogs, both of which went under the car, but neither of which was injured. Dwight Huss and F. Ed Spooner, in the Olds tonneau, with 450 pounds of baggage, made the seventy-six mile run in four hours without the slightest trouble, covering twenty-three miles in one hour. Mr. Pope led the New Yorkers into Albany at 12:10 p. m. He started first. William C. Hurlburt, in the Cadillac, came within an ace of being run over by an electric train, and only saved himself by throwing on all brakes. He broke his chain, but saved himself and the car with his passengers. George H. Lowe has blown out four inner tubes in two days.

Three tire companies are represented here, as follows: The G. & J. Tire Co., by Herbert Githens; the B. F. Goodrich Rubber Co., by Harry Sheldon, and the Diamond Rubber Co., by G. J. Bradley.

More entries have been received to-day, and the West is coming forth strong, now that reports of the success of the tour have circulated generally.

The pilot car was caught and passed to-

day and sent back, and the Albany reception committee was just starting out when the tourists arrived. The committee met and escorted the Boston party, however.

Utica, July 27.—Vile roads beset the tourists to-day in this, the third day's run, and to-night the following protest from the officials and members of the A. A. A. was sent to Governor Odell:

"The undersigned citizens of the United States and members of the American Automobile Association, crossing the Empire State, enroute to St. Louis, highly commend the work done by the State in road making in some sections, but desire to call your attention to the deplorable and dangerous condition of the road on the main thoroughfare between Albany and Buffalo, more particularly that section passed over to-day between Albany and Utica. It is undoubtedly true that throughout the civilized world there does not exist roads in such wretched condition as those which connect so many important cities and towns."

The one hundred miles of to-day's run were accomplished with the utmost difficulty, and to-night every one is wondering why in the nature of things death did not result. Hairbreadth escapes were many, among them being that of Harold Pope, whose Pope-Hartford car skidded into a ditch, to come forth so injured as to be not usable until some extensive repairs have been made. The Olds tonneau, with Dwight Huss driver, was at full cry back of Mr. Pope, when it also went into a ditch, to emerge without injury, however. The Olds was driven on two wheels for a way. The big cars skidded frightfully, and the utmost care had to be taken. So fearful of darkness were the participants in the run that they hurried right along for one hundred miles, and did not stop at Fonda for dinner, reaching this city during the afternoon. To negotiate the road covered to-day in the darkness would be almost suicidal, and many are wondering how F. A. La Roche was able to get through in a rain at nighttime. That must have been a remarkable performance, as well as a trying one. To-day the roads were fair as far as Schenectady, and the drivers were delighted. From the finest of roadways to the worst ever known was the transition after Schenectady was passed, and then swearing began. There was no rut to follow, no two cars followed the same line, and cars skidded from side to side of the road and sank deep in mud holes filled with water. Engines were flooded and carburettors also by the water, and "mud larks" from the endurance run of last year were led anew through the mysteries of plugging. About sixty of the one hundred miles of the day's trip were severely trying, and twenty-two tired drivers, with a lot of very tired passenegrs, reached here. Twenty-three cars left Albany. J. D. Walters decided to go back to New York rather than tackle the terrible roads, of which he had reports. Mrs. Susie Drake Malpass also decided to return after her trying experience of last night. Mrs. Malpass was driving

her 40-horsepower Panhard when the left front wheel came off while travelling at forty miles to the hour. The wheel dropped, but the front spring fortunately caught it. On this wheel caught by the spring the frame was held and the car did not turn over. Mrs. Malpass, with two women friends and her chauffeur, drove from New York to Albany yesterday, as did also Mr. Walters.

There was no effort to scorch to-day, and the times of starting the day's run and of the finish are unobtainable. No such records are maintained and none will be kept for the trip. It is to remain one of pleasure purely. The managers have established a registry, which must be signed nightly after 7:30 o'clock, providing the participant expects to get a certificate. In this way making two controls in one day is obliterated.

The dinner hour has, however, been cut out, and each day's run is made straight through, without a stop. To-day the Olds tonneau made the one hundred mile run, with one unnecessary stop only, in seven hours.

The cars do not bunch on the run at all, and wild efforts to pass are cut out altogether. Parties drop off to participate in the honors thrust toward them by farmers, who seem anxious to do all in their power to make the trip successful. Girls throw apples into the cars.

As the tourists entered Utica to-night they were stoned, and the police had to be called. The trouble started when some children threw apples. Some hoodlums wanted to get into the game, and did so.

There are now twenty-two cars in the tour. To Syracuse, only forty-nine miles, is the trip for Thursday, and Syracuse is preparing to give the tourists the first big reception they have had on the journey. Some additions will be made at Syracuse and others at Rochester.

Vehicle Exhibitors Effect Organization.

This coming Saturday, July 30, is to be Transportation Day at the St. Louis Fair. The railroads will make special rates for the day, and will send delegations of their employees. There is to be a sort of carnival and parade, illustrating the various forms of vehicles and the evolution of passenger transportation, in which the ox cart and the automobile will travel side by side with the old draisine, the bicycle and motorcycle. On the water, too, there will be a pageant illustrative of all the primitive and modern forms of boat travel.

Incidental to this occasion, the exhibitors of automobiles and other vehicles in the Transportation Building have met and formed an organization, under the name of the Transportation Building Exhibitors' Association. In this way they have become better acquainted, and they will co-operate in making Transportation Day a success. It is their plan to have a floral division in the parade, and they will all put their demonstrating cars in line.

Hiring Cab Investigation Continues.

The Supervisors' License Committee of San Francisco, Cal., has resumed its inquiry into the advisability of passing an amended ordinance fixing the rate to be charged for hiring automobiles at \$2.50 an hour instead of \$5, the present rate. Several automobile owners reiterated their objections to the proposed rate, claiming that it is too low in view of the high operating expenses of the machines.

The committee postponed action for the purpose of investigating the books of concerns that rent automobiles. It is desired to ascertain the cost of operating the machine. In the mean time the companies will prepare statements as to the number of machines in operation, their original cost and present value, the earning capacity of each machine a month, the cost of repairs and the operating expenses, as a basis upon which to fix a rate.

Inspector After Motorists on Ferries.

At the investigation into the General Slocum disaster, being conducted by the federal commission, sitting in the Whitehall Building, this city, Captain George B. Knapp, an inspector of boilers, detailed from Dubuque, Iowa, to reinspect harbor vessels here, testified as to the menace to ferryboats caused by law violating automobile drivers.

Captain Knapp testified that he had seen ten automobiles on East River boats the previous day, and that in each machine the statute providing that "the spark be extinguished" was ignored. The machines also ran on and off the boats with their own power, another violation. The Iowa inspector will lay the facts before the Collector of the Port, together with a memorandum of the numbers of the offending machines. The penalty is a fine of \$500.

La Roche Reaches Buffalo.

F. A. La Roche, who left New York on Monday morning in a Darracq to undertake a trip to St. Louis and possibly a return trip without having his engine stop, is progressing finely. On Wednesday he was reported from Buffalo as moving along rapidly and not having had the motor stop. At that time the original plan of Mr. La Roche and his alternate, Le Blanc, of resting by taking turns travelling ahead by train, seemed to have been abandoned, for it was reported that one was sleeping in the tonneau while the other drove.

Auto Travelling Creamery.

The utilitarian side of the motor vehicle is being cultivated in an English dairy country. A motor wagon, equipped, is made to constitute a travelling creamery. The farmers, instead of hauling their milk to a central creamery, have the motor wagon stop at their gates on its daily round. The driving power is utilized for the operation of separators, so that the skim milk is returned to the farmer for stock feeding and fattening purposes.

FAST TIME AT PITTSBURG

Webb Goes Mile in 52 4-5 on Beechwood Speedway—Some Interesting Contests.

Even more of a success than the initial contests were the races held last Saturday afternoon on the Beechwood Speedway, Pittsburgh, Pa., which resulted in some remarkably fast going. There were thirty-one cars competing, and their struggles were watched with close attention by a large number of spectators, an unusual proportion of whom were ladies.

The fastest time of the day was made by a Standard car, entered by the Standard Auto Co. and driven by A. C. Webb. In the open free-for-all race it thundered over the measured mile course in 52 4-5 seconds, having previously made it in 54 seconds.

A system of classification by horsepower was adopted for all but two of the classes. Under it size, weight and motive power were ignored entirely. Five of the six classes were confined to members of the Pittsburgh Automobile Club, but the sixth—Class F—was free for all. The division was as follows:

Class A, from 1 to 7½ horsepower, inclusive; Class B, from 8 to 13 horsepower, inclusive; Class C, from 14 to 20 horsepower, inclusive; Class D, from 20 horsepower and over; Class E, free for all, for members of Automobile Club only; Class F, free for all, without restrictions.

The various classes and the results were as follows:

Class "A," 1 to 7½ horsepower:
J. A. Pietsch, Stevens-Duryea.....1:48
H. H. Artzberger, Artzberger Auto Co.....2:06
Class "B," 8 to 13 horsepower:
C. Heinz, Franklin.....1:32 2-5
C. Fleming, Autocar.....1:49
Class "C," 14 to 20 horsepower:
W. L. Mellon, Pope-Toledo.....1:35
W. L. Dixon, Peerless.....1:44 1-5
E. J. Kent, Pierce.....1:58 1-5
C. B. Colley, Rambler.....2:49 1-4

FINALS.

W. L. Mellon, Pope-Toledo, first; no time taken.
W. L. Dixon, Peerless, second; no time taken.
Class "D," 20 horsepower and over:
R. E. Clemson, Peerless.....1:07 2-5
George E. Turner, Peerless.....1:08 2-5
F. T. F. Lovejoy, Peerless.....1:11 3-5
J. Kennedy, Pope-Toledo.....1:12 2-5
C. K. Hill, Pope-Toledo.....1:13 1-5
F. T. F. Lovejoy, Peerless.....1:17 2-5
A. L. Banker, Pierce.....1:18

FINALS.

George E. Turner, Peerless.....1:08
R. E. Clemson, Peerless.....1:10
Class "E," free-for-all; for members:
R. E. Clemson, Peerless.....1:09
J. Kennedy, Pope-Toledo.....1:15 3-5
F. T. F. Lovejoy, Peerless.....1:16
F. T. F. Lovejoy, Peerless.....1:17 2-5
O. E. Vestal, Richard Brasier.....1:18
A. L. Banker, Pierce.....1:18 1-5
George E. Turner, Peerless.....1:29
C. K. Hill, Pope-Toledo.....1:33 2-5

FINALS.

R. E. Clemson, Peerless.....1:08
J. Kennedy, Pope-Toledo.....1:16 2-5
Class "F," free-for-all; no restrictions:
A. C. Webb, Standard Auto Co.....52 4-5
A. C. Webb, Standard Auto Co.....54

As Class C was about to be run a blocked train confused Starter Elkins, and an accident was narrowly averted. Otherwise the races were without incident.

The races were under charge of the following officers: G. E. Turner, chairman; C. E. Kneeland, clerk of course; W. C. Temple, referee; W. L. Dixon and W. H. Nimick,

judges; W. J. Lewis, E. J. Kent and W. L. Elkins, starters; W. I. Mustlin, F. Meed and S. Lanahan, timers.

August Race Meet for Cleveland.

Races under the auspices of the Cleveland Automobile Club have been arranged, to be held on the Glenville track on Friday and Saturday, August 19 and 20. The events are as follows:

FRIDAY, AUGUST 19.

No. 1—100-yard obstacle race.
No. 2—Two miles for runabouts (stock cars).
No. 3—Five-mile Manufacturers' Challenge Cup, Diamond Rubber Co.
(Open to manufacturers and their representatives. Cup remains in competition until won three times by one manufacturer or his representative. Must be three starters.)
No. 4—Two miles for electrics.
No. 5—Five miles; open handicap; standing start. Limit of handicap, ¾ mile.
No. 6—Two miles, motor cycle; open.
No. 7—Five miles; open for stock touring cars, stripped (Class 1 and 2).

Record trials.

SATURDAY, AUGUST 20.

No. 1A—One mile, open, in heats. (Class 1 and 2.)
No. 2A—Five miles, for electrics.
No. 3A—Five miles, for touring cars with full road equipment. Three passengers in addition to operator.
No. 4A—Ten miles, open handicap.
No. 5A—Five miles, motor cycle; handicap.
No. 6A—Five miles, open, for standard touring cars. Regular stock models, stripped. (Class 1 and 2.)
No. 7A—Ten miles, open.

Record trials.

Entries close on August 17 with George Collister, secretary of the Cleveland Automobile Club, 317 Superior street, Cleveland, Ohio.

Buffalonions Form Racing Association.

The Automobile Racing Association of Buffalo, N. Y., was recently incorporated under the laws of the State of New York for the purpose of promoting automobile racing meets.

The officers are: President, A. H. Knoll, vice-president of the Buffalo Automobile Club and director of the State Association; vice-president, W. C. Jaynes, of the Jaynes Automobile Company; second vice-president, J. A. Cramer, the local agent of the Ford automobile; secretary, C. W. Roe, of the Roe Automobile Company; treasurer, J. B. Eccleston, the secretary of the Centaur Motor Company; director, F. J. Wagner, secretary of the Buffalo Automobile Club.

The officers of this association held a meeting and decided to run a two-day automobile race meet at the Kenilworth track on August 12 and 13. A sanction to conduct this meet has been obtained from A. R. Pardington, chairman of the American Automobile Association, and the contract for the track has been signed.

RECORDS CUT AT OSTEND

World's Kilometre and European Mile Marks Broken by Baras and Rigolly.

Big cuts were made in the two premier European records—the kilometre and the mile—at Ostend, Belgium, last week, where a fortnight of racing, touring, etc., was begun. An elaborate programme had been arranged, and all the European cracks were booked to compete.

The one-mile mark was the first one attacked. On July 21, in the open race for heavy cars, M. Baras, in James Gordon Bennett's big Darracq, covered a mile from a standing start in 0:48 3-5. This performance clipped 8 seconds from the best previous European mark, but, of course, it is still far behind W. K. Vanderbilt, jr.'s, record of 39 seconds made in Florida last January.

M. Rigolly, in a Gobron-Brillie car, covered the distance in 0:50 1-5. In the contest limited to cars of the light grade, M. Hanriot, in a Bayard car, went a mile in 0:56, a new record for this class of vehicle.

On the same day, in the flying kilometre contest, Rigolly, of Paris, with a Gobron-Brillie machine, covered the distance in 21 3-5 seconds, which means a speed of nearly 167 kilometres in the hour, a speed considerably faster than was ever done before. Hanriot, with a Clement Bayard machine, in the light automobile class, was timed in 28 1-5 seconds, while Edmond, with a Darracq, in the voiturette class, made the kilometre in 33 seconds. All these are record times for the various classes.

French Officially Recorded Records.

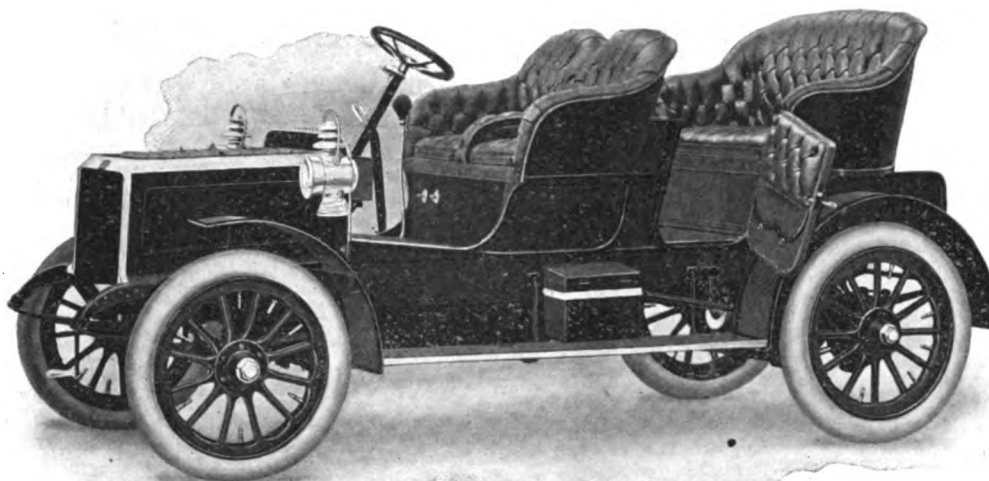
The following record times have been officially recorded by the Automobile Club of France: Flying kilometre, 0:28 1-5; light cars; Hanriot (Clement). Standing mile, 1:00 1-5; light cars; Barras (Darracq). Five kilometres, standing start: Motor bicycles, 3:30 2-5, Griet (Griffon); Voiturettes, 3:15, Villemain (Darracq); light cars, 2:53, Barras (Darracq); heavy cars, 2:36 3-5, Gabriel (De Dietrich).

Oldfield Tries Out Peerless Racer.

A Peerless racer has been turned over to Barney Oldfield, and he had it out in Cleveland a few days ago trying it. He reeled off the first mile at the rate of 1:30 and got down to 1:07 for the third mile, with the last half of the fourth done in 33 seconds. His fifth mile was a second slower than his third. After adjusting the machine Oldfield went three more miles in 1:11, 1:10 and 1:08.

The entire first floor of the Washington Hall building, Plainfield, N. J., has been leased by the newly found Plainfield Automobile Garage Co., the incorporation of which was noted in these columns last week.

WINTON



Steer and Look Happy.

Nothing else to do on the WINTON QUAD—greatest, simplest and safest of four cylinder cars. 24 horse power—more power than you need. Speed in abundance. Substantially constructed. Weight perfectly distributed. Practically automatic in operation. Governed absolutely by air pressure. All working parts—even the pistons—instantly get-at-able. Side entrance tonneau.

\$3000 f. o. b. Cleveland. Complete description and diagrams are ready.



THE WINTON MOTOR CARRIAGE CO.

Member A. L. A. M.

CLEVELAND, O., U. S. A.

New York,

Boston,

Philadelphia

Chicago.

PROMPT DELIVERY.

WINTON AGENCIES EVERYWHERE.

ELECTRIC OF NOVEL DESIGN

Specially-Built Touring car from Hartford is Almost Indistinguishable from Gasolene Type.

For a couple of years the electric vehicle has been following the constructional trend of the gasolene car, until not a few of the features of the latter have been incorporated in the former. The culmination of the movement is seen in an electric touring car just completed by the Electric Vehicle Co.,

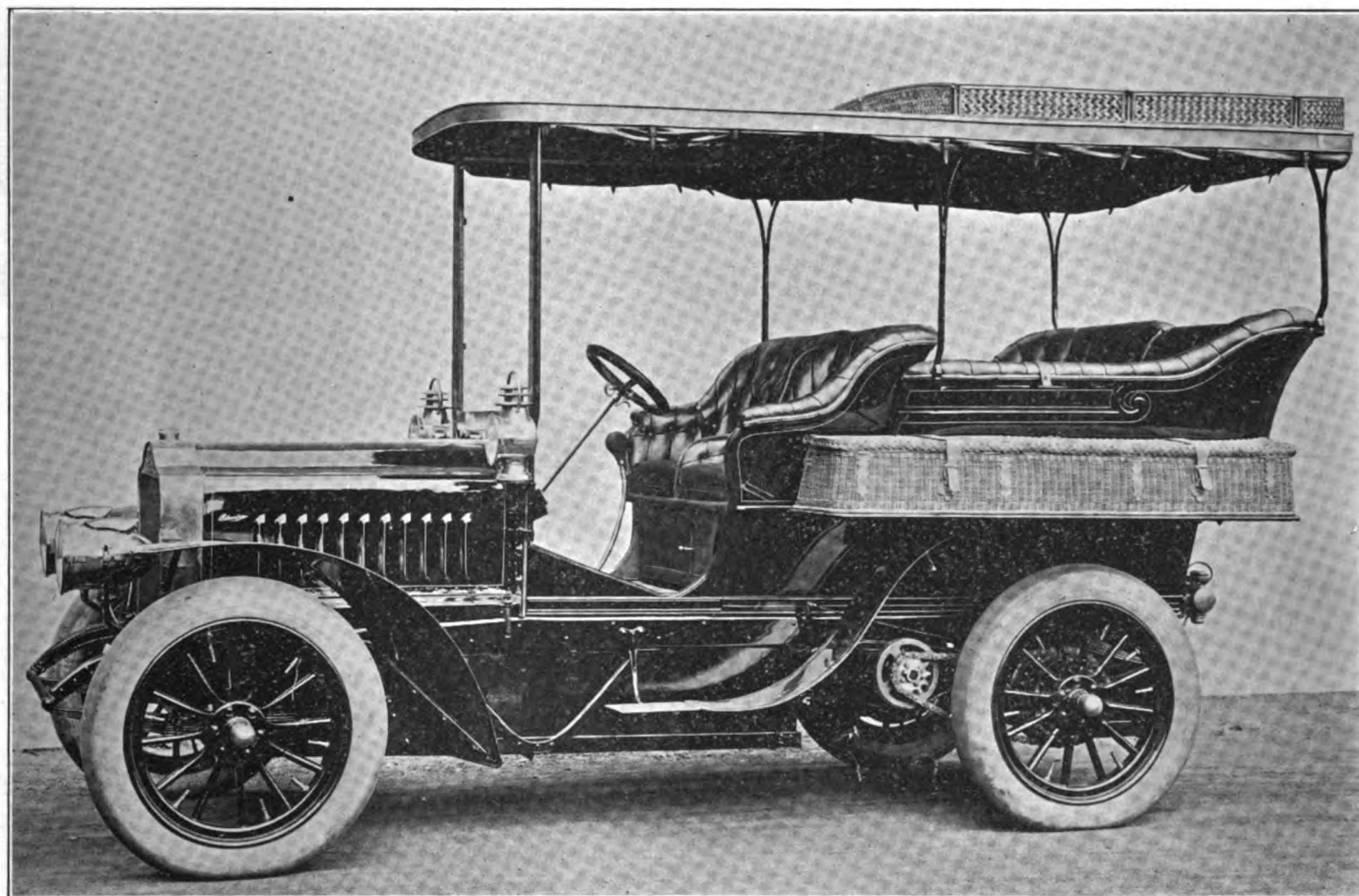
This vehicle is propelled by a single Westinghouse motor of 40 amperes, 140 volts, with herringbone gear reduction to a countershaft and side chains from the countershaft to the rear driving wheels. The battery consists of 116 Edison cells E-27, carried in the front bonnet and beneath the floor of the vehicle. It is divided into two separate groups for charging, the charge being sufficient for sixty miles of travel on good roads.

There are four speeds forward and two backward, with a maximum forward speed of sixteen miles per hour on the level with full load. There are two sets of double act-

CHICAGO'S "THIRD DEGREE"

Rigid Physical and Mental Examination Necessary for Motorists—Eye Glasses Barred.

To drive an automobile in Chicago hereafter it will be necessary to pass an examination so elaborate and rigid that it has been denounced as "absurd" and "ridiculous" by motorists of that city. The new city ordinance, which has been signed by Mayor Harrison, in spite of strong objection, establishes a board of registry, and requires that every



A NEW TYPE OF ELECTRIC VEHICLE. COLUMBIA TOURING CAR BUILT FOR E. E. GOLD.

having been especially designed and built for E. E. Gold, president of the Gold Car Heating and Lighting Co., of this city.

As the illustration makes plain, the vehicle is, in outward appearance, a replica of the regulation high powered gasolene touring car. No detail is lacking to stimulate the latter. The long wheel base, the wheel steer, the immense square bonnet, and the tonneau body, with canopy, side curtains and glass front, make the illusion startlingly complete. Even to the initiated it will appear to be a gasolene car, and only the silent running will reveal the truth. Prior to its delivery, the car was thoroughly tested, with most satisfactory results.

The car has the same dimensions as the Columbia 35-horsepower gasolene car, the wheel base being 106 inches and the wheels 34x5 inches.

ing brakes. The regular brake, which is foot operated, acts on the counter shaft, and the emergency brake, which is hand operated, on the rear wheel hubs.

The controller is of the General Electric type, with resistance on the first notch, and there is a safety switch with removable plug.

There is seating capacity for seven persons—two in the front divided seat and five in the tonneau.

Big Meet for Pittsburg Projected.

Pittsburg is to have a race meet in September, and a strenuous effort will be made to obtain entries from prominent out of town racing men. Some day during the week of September 19 will be selected, and the races will be run on the circular track on Brunots Island, which was the scene of some contests a few weeks ago.

operator shall be registered, for which a fee of \$3 is charged annually by the city.

Intoxicated and reckless persons are prohibited from being registered. Persons having defective eyes who have the defects remedied by glasses "shall have the glasses securely fastened to the nose by a steel frame." Every automobile shall have one of the regulation numbers furnished by the city for \$1 each. The City Electrician and Commissioner of Health comprise the board of registry, and are charged with ascertaining that all applicants are physically and otherwise capable of operating a machine before they are registered.

Commissioner Reynolds and City Electrician Ellicott will prepare the form of the formal notice to be sent to the owners of automobiles. It is planned to arrest all operators at the expiration of a limited time who shall not have presented themselves for registry and secured a new number.

FALL OF BOY SHOOTING STAR

Patchogue Deputy Fails to Prove Case Against Mr. Foley—His Turn Now.

It has been judicially settled that the shooting by a deputy sheriff at the automobile of John Foley, jr., at Patchogue, L. I., on July 17, was not only an outrageous act in excess of authority, but that it was an assault entirely unprovoked, because Foley was not violating the speed law.

The case came up for trial before Justice John R. Vunk at Patchogue on last Friday. Only two witnesses were examined, and they were the bucolics who did the timing for the boy deputy sheriff, Sherman F. Wicks. They were James Buxton and Leonard Still, and had been stationed along the road at a distance supposed to be 110 yards, or one-sixteenth of a mile, apart. When the automobile crossed an imaginary line the man stationed there waved his hat and the other man took the time then and again when the motor car crossed the imaginary line in front of him. The inaccuracy of such timing has been repeatedly exposed, but in this case the "expert" timers could not even state positively that the measurement of the distance was correct. The justice, very properly, dismissed the charge against Foley, who says he was running within the legal limit of ten miles an hour.

W. W. Niles, counsel for the Automobile Club of America, of which Mr. Foley is a member, was present at the trial of the case, and it is understood that Wicks will be prosecuted for assault.

Wicks, the youthful deputy sheriff with the cowboy hat and revolver, enjoyed the notoriety he gained through his shooting at Foley's automobile, and talked big, but with the acquittal of Foley of the charge of speeding the edge of his vainglory began to dull. Sheriff Preston of Suffolk County began an investigation of the case. He has already sent a letter of rebuke to Wicks, and says that if the details as he has heard them are correct, Wicks is not fit to keep his place.

Wicks is twenty-one years old, smooth faced and boyish looking, and wears a big felt hat in Wild Western fashion. The dime novel character of his ideas and aspirations is revealed in an interview, in which there was a manifest desire to make a hero of the deputy. The reporter of The New York World quotes him as saying:

"They give me the laugh," says Wicks. "As the big machine with its four occupants flashed by it came to me that here was a man laughing at the law and refusing to be arrested. I typified the dignity of the law. It doesn't matter whether I am twenty-one or eighty-one. I am a deputy sheriff and this man was breaking the law. He was escaping."

"I aimed to cripple the gear under the machine. I am a good shot. Every American

boy is who is made of the right stuff. I didn't intend to hurt them. I wanted them to know that the law must be respected. That's the trouble in these days. Folks have forgotten that the law means anything. The French automobile is no more in my eye than Jim Dooley's hay wagon. If it had been a lawbreaker on Broadway I know what a New York cop would have done. The law means as much on Main street, Patchogue, as around the foot of your Flat-iron Building."

The two thirty-two calibre bullets, fired by Wicks when Foley failed to stop for him, plunged into the back of the automobile, just escaping one man's legs, and close by a second man's back.

Ask for Special Police Powers.

Police Commissioner McAdoo of New York has received from C. Andrade, jr., counsel for the New York Automobile Trade Association, a letter asking that special police powers be granted to owners and chauffeurs of automobiles, so that they might have the undisputed right to arrest any one who interfered with them while they were touring the city.

"I have not given any especial attention to the request," said the Commissioner, "but on general principles I am opposed to the idea of delegating any special police power to any owner or runner of an automobile. Before deciding, however, I will look further into the question."

Will Repeat Transcontinental Trip.

L. L. Whitman, of Pasadena, Cal., who piloted an Oldsmobile across the continent last summer, is now preparing to repeat the trip in an air-cooled car. He will leave San Francisco about the middle of next month, and will endeavor to catch up with the Scates party, which is now in Wyoming. Whitman is late in starting, but depends upon his experience of last year to help him. Incidentally, Whitman must have undergone a radical change of mind, to be induced to undertake this trip, for after he finished last year he vowed that no amount of money could induce him to make another such journey.

Trio of Tourists Crossing Continent.

Mr. and Mrs. Edward Scates, who left Los Angeles, Cal., on May 10, for a trip across the continent to Portland, Me., are now working their way through Wyoming. In two months they covered 1,500 miles. In crossing the Great Desert, in Nevada, they, strangely enough, were more troubled by rain and mud than by sand. The first 500 miles was made in a 1903 Oldsmobile, but after leaving San Francisco a Stevens-Duryea machine was taken. With Mr. and Mrs. Scates is a fox terrier named Trip.

An appeal to the pocketbook makes prejudice fade. B. F. Jones, of Minneapolis, is promoting a "horse and automobile meet."

BALKED THE FOXY TIPSTER

Trapped Once, Homan Crossed Bridge at a Walk and Foiled the Constables.

How he outwitted a rapacious Long Island rural constable, and at the same time ran across what seemed to be an attempt to "play both ends against the middle," was related to a Motor World man last week by L. J. Homan, of Homan & Schultz, of this city.

"I was driving down on Long Island near Patchogue not long ago," he said, "when, in crossing a dam at a speed that certainly did not exceed six miles an hour, and probably did not reach it, I was stopped by a couple of men, who proved to be constables. I was crossing a bridge, they said, at a speed in excess of four miles an hour, and I would have to go before the 'Squire.' The 'Squire' was suspiciously handy, and he soon convinced me that he considered the planking over the dam a bridge, whether I did or not; and as he interpreted the law there did not seem to be much chance for me.

"I learned that if I pleaded guilty and paid a fine of \$25 I would be permitted to go on without further delay. It was a very simple piece of business; the county paid \$25 for every arrest and conviction, and the 'Squire' imposed the fine while he and the constables divided the money! Do you wonder that business was brisk?

"Well, I paid as the cheapest way out of it. A short time afterward I was in the same neighborhood and on my guard. Coming to a small bridge, I got my companion to alight and walk across the bridge in front of the car. This, of course, blocked the fining game, for even four miles an hour could not be exceeded by a man walking.

"But they had a new game ready to spring. At the end of the bridge a man, who looked the rural constable to a dot, approached me and said:

"'You had better not go too fast; they are laying for you down the road.'

"I thanked him, and remarked that I did not suppose it made him very popular to thus spoil business.

"'Well, I don't charge anything for warning people,' he said, with an emphasis on the 'charge'; as much as to say that he would not refuse voluntary contributions. But I did not take the hint, and he walked off looking rather glum."

Sheriff Hunts Criminals in Auto.

W. V. Buckner, Sheriff of Kings County, Cal., has done away with the horse and buggy and hunts up outlaws and criminals in the Rambler car. As a result of this new method of quick travelling, the Sheriff made the capture of a very dangerous convict in Hanford, simply because he managed to get there ahead of the train.

POLICE MAKE A HAUL

Boston Motorists Rounded up—Only 126 Out of 234 Found Complying with Law.

The long threatened wholesale "hold-up," or inspection, of Boston automobiles took place on Wednesday afternoon, July 20. Its object was to learn how the new State automobile ordinance was being complied with, in view of the numerous complaints made to the police to the effect that large numbers of motorists were violating it. The examination had been impending for some time, and the police only waited for a fine day to make it.

There were just 234 automobiles examined by the police during the hours assigned to them for the inspection. Although this is nowhere near all of the machines owned in Boston, the results are to be considered typical of what would be found by a complete canvass. The police reports show that the largest number of automobiles was examined by the Back Bay police, who have made returns of the inspection of ninety-one cars. Division 12, in South Boston, examined only one car, and there were only two stopped in the North End. Of the entire number only 126 cars conformed to all of the requirements and will be reported to the Highway Commission as being correct in every particular. Besides these, one car was stopped which had a New York certificate, and one which had a Pennsylvania card, but the operator of the latter car was unable to show any chauffeur's certificate.

In all there were sixty-two operators who could show no certificates either for the machine or the chauffeurs, and besides these there were twenty-nine who had no certificates for the machine, and thirteen who had no chauffeur's license. Thirty-five cars were without any numbers on the lamps, and five machines had no lamps at all. There were two whose numbers on the lamps did not agree with the numbers on the certificates; one had numbers on his lamps which did not agree with the registration numbers on the front and rear of the machine. One man had no numbers whatever on his machine; two had no number on the front of their cars; three had no number on the rear; five had numbers which did not agree with those on their certificates, and two had improper numbers. One of these cars improperly marked had the numbers stencilled, and one had a black substitute in the rear. In two cases the rear numbers were indistinct. One man had his rear plate attached to the side step. Twenty-one chauffeurs had no badges. One chauffeur had lost his certificate, and another said that he had left his certificate at home.

The returns have not yet been handed over to the Highway Commission, so that the action to be taken, if any, against those who are infringing the regulations, will not be

determined until some time this week, when the Board of Police will probably hold another conference with the commission to consider the matter. Whether the crusade will be pursued any further so as to include what machines in the city were not inspected at this time is also a matter which is yet to come up for final decision.

With these reports the Board of Police will also hand to the Highway Commission a list of all the convictions made against automobilists this season for infringements of the automobile law and regulations, and it is believed that some of the most flagrant infringements will result in decisive action.



THE NEW \$525 ORIENT TONNEAU CAR.

THAT ORIENT TONNEAU

Waltham Company's Latest Offering Presents Pleasing Appearance—Some of its Details.

The newest member of the Orient family, the tonneau, the debut of which, priced at the startling figure of \$525, was noted last week, is, as the illustration shows, an attractive appearing car. Its long wheel base permits the fitting of a roomy and comfortable body, which easily holds four people. Like its sister, the Orient surrey, the ton-

Briscoe Will not Make Autos.

Benjamin Briscoe, formerly president of the Briscoe Mfg. Co., of Detroit, severed all connections with that concern when he became interested in the Maxwell-Briscoe Motor Co., at Tarrytown, N. Y. In spite of this, a report has spread that the Detroit firm intended to make automobiles. Relative to the matter, Mr. Frank Briscoe, the present head of the Briscoe Mfg. Co., of Detroit, has sent the following letter to the Motor World:

"An item has been going the rounds of the trade papers, copied evidently from an item that appeared in a Detroit paper, to the effect that the Briscoe Mfg. Co., or some of its officers, were contemplating going into the automobile business. This is the same item, evidently, that some unknown person has been endeavoring to circulate for a number of months, presumably with the intention of injuring the business of this company.

"You will do us a great favor if you will state in your news columns that this rumor is entirely false. As we have not been able to trace it down to its source, we are coming to the conclusion that it is inspired by malicious intentions."

neau embodies such features as wheel steering, bonnet effect in front, full elliptical springs and motor attached to rear axle. Altogether, it is a simple, easily operated little car, capable of attaining a high rate of speed, and little liable to get out of order.

The illustration shows the vehicle garnished with some striking types of Waltham feminine loveliness. The fortunate gentleman in the front seat is John Robbins, the Waltham Co.'s old reliable tester, who has long exercised a fostering care over all the new Waltham creations.

B'IE Homan & Schultz Separate.

The separation of Homan & Schultz, the well known dealers, of this city, is now complete. On Tuesday Mr. Homan purchased the interest of Mr. Schultz in the store at No. 134 West Thirty-eighth street, where Rambler and National cars are sold, and will conduct the business alone. It is probable that the old name will be retained. Mr. Homan stated to a Motor World man that he did not think any change of title would be made.

Homan & Schultz formerly conducted two stores—the one on Thirty-eighth street referred to, and another at 2,342 Broadway.

GLIDDEN'S GLOBE GIRDLING

Off for St. Louis on First Leg of a Three Year
Tour to Everywhere.

In starting with the Boston contingent on the tour to St. Louis last Monday morning, Mr. and Mrs. Charles J. Glidden, of Boston, were but setting forth on the first leg of a three years' globe wandering trip.

It is not simply a trip around the world on which the Gliddens are now starting out, but a sequel to their tour of last year, when they visited sixteen countries of Europe and made a mileage of 16,200 and scored the distinction of being the first to cross the Arctic circle. It is the ambitious desire of Mr. and Mrs. Glidden to visit every country in the world where it is possible to go with their automobile.

Ten months ago arrangements were commenced for this somewhat hazardous and unusual undertaking, hundreds of letters having been exchanged with representatives of this government in far away and remote countries and with officials of foreign governments to be visited, to ascertain the rules and regulations controlling the operation of automobiles; also with railway and steamship companies regarding transportation, and with dealers in gasoline and lubricating oils concerning the distribution of these necessities at convenient points along the route.

The same car in which Mr. and Mrs. Glidden crossed the Arctic circle in August, last year, will be used on this tour. It is a 24-horsepower Napier, and was built in England on lines laid down by Mr. Glidden himself. At the Crystal Palace show in London in February, 1902, it was awarded first prize. Since the European trip this car has been improved, new devices invented within a twelvemonth having been added. The car, in charge of Mr. Charles Thomas, of London, the expert mechanic who accompanied Mr. Glidden on his European trip, arrived in Boston last Saturday.

Besides his wife, Mr. Glidden will be accompanied by Charles Thomas, an "engineer" whom he engaged in London last year.

At St. Louis Mr. Glidden's car will be shown for ten days in the transportation department of the exposition, and on August 25 or thereabouts the trip to the Pacific will be taken up.

As yet the route from St. Louis to the Pacific has not been decided upon, and probably will not be until St. Louis is reached. But from either San Francisco or Vancouver a steamer will be taken for Honolulu, where several days will be spent in sightseeing.

That city and its surroundings done, the next move will be to New Zealand, away down below the equator, where the climate is said to be the most healthful in the world. The principal cities of the islands comprising the commonwealth will be visited, when a steamer will be taken to Tasmania, an is-

and to the south of Australia, belonging to Great Britain.

From Tasmania the route leads to Australia. An extended stay will be made in this country.

The next country in which the car will be landed is the Philippines. Then comes Java and, if possible, the remarkable ruins in that prosperous Dutch colony will be visited. Borneo, where the warlike Moros of the Southern Philippines are supposed to have come from, will be the next country touched, but it is not likely that Mr. Glidden will find the wheeling very good there or in Sumatra, his next stopping place.

Considerable enjoyment is looked for in Singapore, which is just south of the Malayan Peninsula. All colors known to the garbs of the peoples of the earth may be seen in Singapore. Automobile carriages are common, but one from this side of the world, ridden all the way, save where the ocean intervenes, has yet to be seen.

China will be the next landing place. Mr. Glidden hoped to make an extended run in this country, but was advised by a correspondent that the very narrow roads and other conditions would make motoring outside of Hong Kong anything but agreeable.

The next stage of the journey, 1,067 miles, from Hong Kong to Nagasaki, in Japan, will be made on one of the Peninsular and Oriental steamers. All roads in Japan are good roads, and gasoline can be obtained in all the principal cities at about the same prices as obtain here. Mr. Glidden plans to make a run of about 20,000 miles in Japan. The summer and fall of 1905 will be spent in Japan. Then the island of Ceylon will be explored, and a steamer will be taken from Colombo, Ceylon, to Madras, India. The distance is 450 miles. Madras is in Southern India.

The route from Madras will be north to Bombay, from which city tours will be made to the principal cities.

Mr. Glidden expects to visit the Ghauts, two famous ranges of mountains extending along the eastern and western shores of the Indian peninsula, and the capital, Allahabad, on the Jumna at its junction with the Ganges, 844 miles from Bombay. Three hundred and forty-four miles of this run is on the great trunk road running through Central India as far north as Agra, 1,000 miles from Bombay. The roads all through India are reputed good, a magnificent one following the river Jumna from Agra through Muttra to Delhi by the way of Jeypoor, 280 miles. From Delhi the party will drive to Umballa, Aritsar, Lahore, Rawalpindi, Peshawar and to the Afghanistan frontier, 665 miles, a total distance from Bombay of 1,945 miles.

At Rawalpindi a side trip over a good road will likely be made to the western part of the Himalayas to the plains of Cashmere. On such a run mountains varying in height from 15,000 to 20,000 feet may be seen. Afghanistan is practically closed to foreigners, but Mr. Glidden has been assured that a de-

tachment of the Khyber Rifles will be detailed to escort him through the pass into Afghanistan on any Tuesday or Friday, though he was warned that it would be dangerous for him to attempt to reach Cabul.

He expects to visit Cawnpore, the place of the great Indian Mutiny of 1857; Lucknow, Benares and Calcutta, gasoline for many of the side trips going ahead by camel or elephant transportation. Darjeeling is also on the Indian schedule. It has an elevation of 7,200 feet, and is considered the most beautiful of all India's hill stations. At this place the Himalayas divide India from Thibet, one of the peaks, Mount Everest, being 29,000 feet high.

There being no roads from Northern India through Persia and Turkey to Europe, Mr. Glidden will return from the north of India to Bombay, where he will take a steamer to the Red Sea and the Suez Canal. At Port Said or Alexandria water transportation will be taken to Joppa for a visit to the Holy Land. This seems to be the only satisfying way to get to Jerusalem, as the overland route from Suez to Syria is a wild waste of loose sand, like that on a wild beach above high water mark.

Mr. Glidden will try to get permission to send his automobile through the entire city of Jerusalem. Before leaving the Holy Land he will visit Jericho, Hebron and the Mount of Olives, and he hopes to be able to reach the Jordan near its entrance to the Dead Sea.

Leaving the Holy Land, he will shape a course for Greece, where the roads in the southern part of the country are reported good. He will go to Athens and from there make runs to Marathon, Tatol, Kephissia, Eleusis Laurium, Cape Sunion, Corinth, Olympia, Sparta and Thebes.

Sicily will be the next country to see the American tourists. From here the party will cross to Italy and tour the entire country. Halts will be made at Naples and Sorrento, and a side trip taken to Vesuvius and Rome, Mestre, Padua, Bologna and Florence will also be visited.

After Italy has been thoroughly toured the big motor car will be taken over into Africa for a tour of Tunis, Tripoli and Algeria. On this side trip the car will be run 250 miles into Sahara. Next comes Spain, with its wealth of interest for the tourist.

From Spain, which will be left near the French town Behobie, on the border, the run through France will be over the Napoleonic roads. Nearly all French roads are good, and fast time will be made from the Spanish frontier to Paris, where a short stay will be made before continuing the tour across the channel to Dover, thence for a run through Merry England to London, where steamer bookings will be made for the last lap of the long journey, across the Atlantic to Boston.

Mr. Glidden does not expect to return to Boston before 1907. The entire tour will cover a distance of between 40,000 and 50,000 miles.

PLAIN CHAUFFEURS PREFERRED

By Parents, but British Maidens Like the Handsome Kind—An Example.

According to a woman correspondent for a New York daily, the chauffeur in England is becoming a Lothario who is more dangerous than ever coachman or bicycle instructors or roller skating teachers were. This peculiar fascination of the chauffeur over the fair sex has not yet been very conspicuous here, but it is comprehensible that a daring and dashing driver, with perfect control of his car, should become something of a hero, and the primitive instinct of woman was ever prone to hero worship. The news from England therefore may be received here as something in the nature of a warning. Hardly a week passes in which the chauffeur does not figure in some tragic romance, says the correspondent. Only a few days ago two chauffeurs were cited in a divorce case which revealed a blighted home and an honored name besmirched. About the same time a pretty debutante was found drowned in a lake. A letter which she had left was destroyed by her guardian that its contents might not be made public. She had fallen in love with her chauffeur and no longer had the courage to face life, having discovered that he was not only a married man with children, but, after winning her affections, had been base enough to show her letters to other servants of the household.

The London smart set is eagerly awaiting developments in the case of Miss Baldock, who still stubbornly clings to her determination to marry her handsome young chauffeur. She only recently passed her twenty-first birthday, and has an income of \$5,000 a year, with expectations, bound to be realized if she lives, of inheriting an additional \$75,000 a year. This may perhaps account for the fact that the chauffeur has refused an offer made by the girl's father of \$50,000 cash down to call the match off and exile himself until the young girl has outgrown her infatuation for him. He will come of age in September, and the girl has so far yielded to persuasion as to consent to the postponement of the marriage until October, but stoutly protests that she will make no further concessions to her parents' feelings. The father has issued his ultimatum to the effect that the day she leaves her home to become the bride of the chauffeur its doors will be closed against her forever.

A striking recognition of the dangers involved in bringing a chauffeur into the household is afforded by an advertisement for a motor car driver which recently appeared, in which it was stated "only plain looking men need apply." Time was when, among the servants, coachmen had far the best opportunities for capturing romantic heiresses, and that they have not failed to make the most of their chances numerous society scandals attest. But now the chauffeur is distinctly

ahead of the Jehu in playing this sort of game with Cupid, despite the fact that he is often required to wear goggles and a hideous mask.

To Start When Crank is Lost.

It has happened that the starting crank becomes mislaid or even lost, and it then becomes a serious question what to do.

There are a number of ways of starting the engine without a handle. One consists of rolling a cord round the flywheel or round the clutch, then pulling hard enough to overcome the compression of the motor. This method is not easily applied to every motor, and unless performed with considerable dexterity presents some danger, for the cord may get entangled in the moving shafts if it is not withdrawn with extreme rapidity.

A simpler means is to set the transmission on the high gear, and, letting in the clutch, get some one to push the car; then whenever an explosion occurs withdraw the clutch. To start the motor in this fashion it is necessary to use the high gear, because the low gears would drive the motor much too fast, besides requiring an effort of strength to push the car beyond the help usually obtainable. Naturally, if the car can be started on a slightly downhill road, the work will be the easier.

Motorists Pay Toll From Choice.

Because there were no such things as automobiles when the charters were granted, automobile owners do not have to pay toll on the county roads that are under private ownership in Wisconsin. This fact was brought out at a meeting of the county board committee on highways and bridges.

The charter of the Fond du Lac toll road was granted in 1868, and provided that horses might be taxed at so much a head. The same provisions were made as to the Whitefish Bay toll road. Since bicycles and automobiles came into use they have been taxed on the latter road at the rate of five cents for a bicycle, 10 cents for a single seated automobile and 15 cents for one with two seats.

The supervisors claim this tax is illegal, but as none of the automobile owners protest as long as the money goes toward the improvement of the roads, the point is not likely to be tested.

Two-Strip Puncture-Proof Band.

To baffle the attacks of the puncture fiend a British device is made of specially cured rubber with fabric, the curing being performed by a secret process involving the use of an electrical method which renders it very tough, yet soft, light and durable. It is made in the form of a band, which consists of two pieces, one narrow strip solutioned and rolled into the wider by hydraulic pressure, making practically one strip with a thickened under tread. As is well known, punctures do not occur direct, but penetrate gradually sidewise, lengthwise and across. Therefore should any nail, flint or glass penetrate the first wide strip, it is then met by the resistance of the narrower strip, thus entirely protecting the inner tube.

THE INQUISITIVE ON-LOOKER

He Unexpectedly Hit Upon the Cause of the Car's Sudden Stoppage.

He was an old motorist, and therefore should have known better. But when the test came he failed as completely as any novice.

When he had concluded the negotiations for a new car he determined to drive it home. "Home" was about thirty miles from Philadelphia, where the purchase was made. A friend went along to partake of the first ride in the new machine, and everything went well until the journey was almost finished. Then, just as the main street of the town was reached, the car, which had seemed to lose power during the last few minutes, came to a dead stop.

A hasty examination of the parts which were most likely to be the cause of the trouble threw no light on the subject. A crowd had collected, and the questions and comments began to be embarrassing. It was all most annoying, and both men felt, and looked, uncomfortable.

Suddenly one bystander who, more inquisitive than his fellows, had unscrewed the top of the gasoline tank and explored the depths of the latter with a stick, uttered an exclamation. "There's no gasoline in it!" he cried. Sure enough, the tank was empty. The crestfallen owner procured a supply from a nearby garage and poured it in his tank. Then he started his engine and drove off amid the ironical cheers of the spectators.

Iniquitous Ordinance Leads to Organization.

Brought to a realization of the necessity of organization by an iniquitous ordinance just passed, motorists of Jackson, Mich., have formed a club. Thirty-five of them were present at the birth, and from their ranks elected the following officers: President, Emmet L. Smith; vice-president, A. A. Bennett; secretary and treasurer, Winthrop Withington, and captain, E. S. Bowman.

A committee, consisting of R. S. Woodliff, A. A. Bennett and Carl Ebrle, was appointed to confer with the members of the council and endeavor to secure a better ordinance. The latter fixes the maximum speed at seven miles an hour, and requires a motorist to stop at the raising of the hand of a horse driver. The usual numbering and licensing clauses form part of the law.

Barker Praises Jamaica Roads.

Harry Barker, formerly of Lowell, Mass., has returned from Kingston, Jamaica, with the Stevens-Duryea car which he has run all winter on the island. Mr. Barker says the roads for automobiles in Jamaica are perfect, the poorest ones there being superior to those usually used as State highways here. They are all government roads there, are hard as asphalt and wide. The garrisons in the different towns keep them in order. Mr. Barker was the proud possessor of one of the four automobiles on the entire island, and toured the place from one end to the other.

An Assortment of Freak Cars.

Manufacturers as a rule will not take orders for special machines radically different from their regular output but a few do so and have produced what may be called freak machines. It costs to have a special made, but some members of royalty, some children of the very rich, a dwarf and one beggar have enjoyed this privilege.

An automobile made for the Cuban dwarf Chiquita is called the smallest ever made. The dwarf himself is but twenty-six inches high, and his little electric victoria is built on miniature measurements. Each wheel is 12 inches in diameter and is fitted with 1½-inch pneumatic tires. There is only 4 inches of distance between the step and the ground, and from seat to ground is 14 inches. It is fitted with a leather top, cushions, electric lights, gongs and steering gear. Although this automobile is so tiny it is guaranteed to run for 200 hours over level surfaces without any attention except what is needed to guide and control it.

Master George J. Gould is one of the fortunate small boys who owns a motor car made to his size. He uses it in Lakewood. Its total length is 4 feet, and from ground to seat it measures 2 feet. The front wheels are 16 inches in diameter, and the rear ones 20 inches. It is an electric machine, and will run over twenty miles without recharging.

A little one-horsepower machine is run about the streets of Paris by a cripple, who was once a beggar. Having lost both legs, he begged a living, travelling about the city on a truck propelled by levers. He made so much money that he was able to buy his electric car, and now delivers letters and small packages. He does a good business.

Chic Corsets for Chauffeuses.

A genuine boon to chauffeuses is this corset, which is described in the columns of a Pittsburg paper devoted to feminine readers:

"A very distinct novelty is a special corset for motoring made of a soft white kid. Here is an admirable idea; for the size of it the corset is about the most warmth giving garment we wear. It envelops and protects the vital parts. Those who have had the unpleasant experience of motoring on a cold day when insufficiently clad will realize what a difference this matter of a wind-proof corset would have made.

"It is constructed in various shapes, and on the score of appearance as well as of comfort and suitability leaves nothing to be desired. The kid has a delightful pliability, which makes it singularly adaptable to the purpose, and one would not be surprised to see these corsets come into use for ordinary purposes and other occasions than that for which they have been designed."

Paste for Cylinder Fractures.

Most engine cylinders are castings, and a casting is not only easily broken, but is liable to have flaws resulting from the running of the molten metal. It very rarely

happens that a cylinder cracks, or that flaws which the constructor had failed to discover reveal themselves by wear, but although cases are rare, they sometimes occur, and the following is a remedy which may be adopted till a new cylinder can be obtained: Make a thick paste with: Very fine dust filings of iron, 1 part; flower of sulphur, 1 part; sal ammoniac, 1 part; and a little water.

This paste is squeezed into the crack or flaw by means of a spatula or screwdriver, and the part is then heated by means of a very hot soldering iron or a soldering lamp, or, in the absence of these, a bar of iron made red hot. This paste acquires the hardness of the casting, and holds very well. It may even be used in certain cases to bind together the parts of a broken casting. The operation evidently cannot be performed on the open road, but it may easily be done in any town or village.

Scotland Toured by American Girl.

An American girl, Miss Ethel Geraldine Rockefeller, daughter of William Rockefeller, of New-York, has returned to London after a long and interesting motor trip through Scotland. She covered every bit of the southern division of Scotland, and made herself familiar with every scrap of old Edinburgh. Armed with a camera, she made snapshots at all the spots visited, and motored across the border right down to Yorkshire, staying a day at Scarborough and going on to York-minster, as well as taking in the cathedrals of Peterborough and Lichfield on the way.

Scarritt has a Narrow Escape.

While travelling with J. B. Dill to Rangeley Lakes, Maine, by way of Quebec, on Wednesday, the axle of the car of W. E. Scarritt, president of the Automobile Club of America, broke near Quebec, Ont., and he and his party were thrown into the road. No one was much hurt, and J. B. Dill, who was in a car behind, turned out just in time to avoid the wreck.

Care of Ball Bearing Wheels.

In removing a ball bearing wheel the cone and lock nut are unscrewed in the same direction as the run of the wheel, i. e., the thread is left handed in the case of the right wheel, and vice versa, the left being thus the same as the cap. The cones and cups and balls should be all carefully examined after cleaning, and if worn rough renewed at the earliest opportunity.

Inspector Recommends Gasolene Ordinance.

In the report of Building Inspector Fox, of Hartford, Conn., mention is made of the increased danger of fire due to the storage of large quantities of gasolene for automobiles in various parts of the city. Ordinances governing the storage of gasolene and also the amounts to be carried by automobiles are recommended.

Wheel Stresses and Strains.

It should be remembered that wheels, although they will stand an immense amount of up and down strain, are not built to resist great side wrench. Care should, therefore, be taken when turning round on narrow roads or in streets that the wheels are not allowed to graze heavily against the edge of the curb, whether it consist of earth or stone. If a wheel strikes obstacles at a pretty bold angle it will, as a rule, surmount it, but if at a very slight angle the strain on touching is immense, and, if the vehicle is heavily laden, sufficient to break any wheel that was ever made.

The exceedingly low centre of gravity of most cars enables corners to be taken at a greater speed than would be possible with any other form of vehicle, but it should not be forgotten that the centrifugal strain has to be taken somewhere, and is borne by the tires, the spokes and axle, also in some degree by the springs and frame.

If any proof of this fact be needed, it is only necessary to turn a corner quickly and then have a look at the road. It will be seen how all four wheels have been subjected to side strain, and how the displaced road material shows clearly how centrifugal force has been borne by the wheels in the act of turning.

David B. and the Auto.

Very soon New York State may be ringing with the sound of the sternly and solemnly uttered words, "I am an automobilist," by David B. Hill. This man, who makes no secret of his politics, is now at Normandie-by-the-Sea, N. J., and has been so charmed by a little automobile riding that he has declared he will purchase one. It is doubtful if he will get one from Cleveland.

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COMPETITION FOR WAR CARS

**French Military Authorities Institute a Contest
Designed to Reveal Most Suitable Vehicles.**

The French War Office is about to purchase a certain number of heavy traction self-propelled vehicles for the transport of food and ammunition, and in order that they may have an opportunity of making a good selection they have organized a competition, with the assistance of M. Max Richard, president of the *Chambre Syndicale d'Automobile*. This competition will take place over a distance of 510 kilometres (317 miles), and will extend over eight days, during which time the cars will be weighed and tested over different routes, both level and hilly, and the three vehicles that produce the best results will be purchased by the State at a price not exceeding 8,500 francs (\$1,700).

In addition to this, a diploma will be given to each competitor who comes through the trial successfully. Only cars of French make may be entered, and the driving power may be obtained by explosion motors driven by petrol, alcohol or petroleum. The minimum power of the motor shall be 12 horsepower at 1,000 turns per minute, and the vehicle loaded must not weigh more than 3,400 kilos (7,500 lbs.), out of which 1,600 kilos, at least (3,880 lbs.) must be useful load.

Explosion motors must be furnished with electric ignition, and there must be at least three speeds and reverse motion. The speeds must be at least $3\frac{1}{2}$ to $4\frac{1}{2}$ kilometres for the slowest speed and 16 to 18 kilometres (10 to 11 miles) for the highest speed. Either chains or cardan drive may be used, and there must be three brakes acting both ways. The tires may be either iron or rubber, and the frame may be either of stamped steel, tubular plate or armoured wood. The width between the wheels must not be more than 2 metres, and the length between the axles must be at least 2.1-2 metres. The body must resemble as nearly as possible military wagons, of which a specimen may be examined by the competitors. The jury will have to deal with:—

- (1) The power of the motor.
- (2) The simplicity and accessibility of the different parts.
- (3) The cooling.
- (4) The consumption of fuel and oil.
- (5) The working and strength of the parts.
- (6) The strength of the wheels and tires.
- (7) The power of the brakes.
- (8) The steering gear.
- (9) The possibility of getting away quickly and of climbing hills.
- (10) The proportion between useful load and total load.
- (11) The average speed.
- (12) Price.

The results of the competition will be made public.

Making Valve Repairs.

A valve breaks usually by the stem, which is often not sufficiently strengthened where it joins the head. The repair of such a break on the roadside is impossible, and it is for that reason that it becomes necessary to carry spare inlet and exhaust valves which can be readily fitted.

Should one be so unfortunate as to have no spare valve, the broken part may be repaired by any village ironworker having a lathe, however primitive. A hole is drilled well through the centre of the head, and a steel rod of the required length and thickness driven through and riveted. If an inlet valve breaks at the pin hole or at the nut which retains the spring in position, either the pin or the nut may be substituted by a small washer or collar (if necessary made

CUTLER'S SPLENDID CAR

**Knox Company Builds a Luxurious and Finely
Appointed Touring Vehicle for its President.**

One of the most luxurious and finely appointed cars yet turned out of the Knox factory is the touring car here shown, which was built especially for President E. H. Cutler of the Knox company, and with which the latter is now touring with his family through Maine, New Hampshire and along the Massachusetts coast. It is complete in every detail, and the beauty of its finish and its roominess and provision for comfort are conspicuously in evidence.

The long wheel base permits of the side



A PRESIDENT'S PRIVATE CAR; KNOX WITH SIDE ENTRANCE AND CAPE TOP.

out of a metal trousers button) being placed on the stem, and the broken end of the stem then turned over by tapping with a hammer to retain the washer in position. Should the nut screw be simply stripped, the nut is placed in position, and the end of the stem riveted to hold it by tapping as above. But this riveting process must be done with care to avoid breaking the stem, which is generally sufficiently fragile. It will, of course, be understood that this riveting must be done after the head has been placed on its seat.

Should an inlet valve spring be wanting in strength, be too weak to close the valve quick enough, the defect may be remedied temporarily by stretching before mounting it on the stem, but it should be replaced on the first opportunity.

A new building, especially designed for automobile storage, is being erected at Marshalltown, Iowa, by Williams Bros.

entrance shown, easy access to which is provided by a step just in front of the rear wheel. The folding top is covered with brown canvas, and is very light and so designed that it acts as a dust shield when thrown back as well as when raised. It can be raised or lowered in thirty seconds, and has attachable side curtains. Instead of the usual wicker baskets, Mr. Cutler carries two suit cases, which fit into waterproof canvas coverings and are attached to the car in such a manner that they can be taken off by simply loosening three buckles.

Underneath the rear seat there is a considerable luggage carrying space, access to which is had from the rear.

"The A. B. C. of Electricity" will aid you in understanding many things about motors that may now seem hard of understanding. Price 50 cents. The Goodman Co., 154 Nassau street, New York. ***

WAYWARDNESS OF WORKMEN

They Will do Things in Their Own Way, Despite Instructions—An Example.

"Bah! It makes me tired the way these workmen disregard instructions and do things their own way," growled a metropolitan dealer the other day. "You have got to watch them like a hawk, or they will do some fool thing that will let you in for a lot of trouble. They are all alike, however, so there is not much use in jumping on them.

"This time it was a tire," he went on, walking with the Motor World man to his office. "A customer brought a car in with a single tube tire that was chafed on the rim—so badly chafed for a distance of several inches that it was scarcely worth while trying to repair it. He tried to fix the blame on us, saying the tire had not been properly cemented, and I had hard work getting out of it. But I finally fixed him up by selling him a new tire at a specially low price. He was extremely solicitous about having the new one put on right, and I assured him that it would be properly attended to.

"Naturally, I was concerned to see that this was done, and when I turned the job over to one of my men, I gave him very specific instructions regarding the matter. In particular I cautioned him to use plenty of cement and to see that it took a firm hold on the tire. I did not want another case of rim cutting.

"Well, by the merest chance I happened to be back in the repair shop as the man was putting the tire on, and something impelled me to walk over and take a look at it. He had it on the wheel and was screwing up one of the lugs. I was about to turn away, when something—whether it was the man's manner, I don't know—led me to say: 'You put plenty of cement on?' He mumbled something inaudible in reply. I stooped down and pried part of the tire back with my thumbs, and, would you believe it, there wasn't a vestige of cement there! I made him unfasten the lugs and roll the tire off, and there was the rim as innocent of cement as the day it came from the factory rolls. Heavens! I was mad! In reply to my pointed remarks the repairman contended that cement was not required; that the lugs and inflation would hold the tire all right. I did not argue the matter, but I did say some emphatic things about following instructions, and I think they impressed the man a little. But there. He will do the same thing again if he thinks he won't be found out. And if I discharged him, the man I got in his place would be no better."

Baltimore has a gasoline committee on its Board of Public Safety, which is at work on an ordinance to regulate the storage, use and sale of that liquid.

Desk Demonstration of Dunlop Detachable.

Those who want to learn just how the latest and simplest Dunlop tire works can do so without troubling to go to a shop and remove one from an actual wheel. Thanks to a remarkably novel advertising card just put out by the Hartford Rubber Works Co., any one can now sit at his desk and play with the scheme on which the "Perfected Dunlop" is fastened and detached.

The card circular is gotten up on the principle that a little illustration is worth a world of explanation. On one page of the circular is pasted a cardboard wheel that stands out in relief nearly a quarter of an inch; around it, on the outside, is a thin paper tire held in place by a light piece of semi-tubular metal made to represent the clamping ring of the "Perfected Dunlop." The turnbuckle on the clamping ring is duly represented, but in order to remove the ring it is necessary only to spring it open with the fingers; the paper tire then slips off without any tugging, just as the rubber tire does from the real rim. It is strikingly clever, this working illustration, and convincing, too. It approximates the real thing very closely, and from it one can readily understand how simple the actual process is with a clamping ring provided with a right and left hand thread.

Auto Mail Car Outclasses Rival.

The six-horsepower mail car in use at the St. Louis Exposition is making a record for itself as compared with the horse service. One automobile and one horse are employed to gather and distribute mail at the Fair. With the automobile six daily collections are made through the Plateau of States and the part of the grounds which includes all of the exhibit palaces.

In the morning at 8 o'clock the motor car takes carriers to the several points where they begin distribution. Four men are carried on the first trip and three on the second. This consumes half an hour. At 2:30 the car, returning from its second trip, stops for the first collection at the Inside Inn. The automobile conveys 800 letters to this place at each delivery five times a day. The papers carried by the automobile to the Inside Inn average 1,000 pounds daily. Each motor car collection through the grounds requires from 50 minutes to an hour. There are 50 boxes on this route. The mounted horse collection requires two horses for 30 boxes.

Quakers Form Power Association.

The Motor Power Association was formed last week at Philadelphia by a number of well known tradesmen, from whose ranks these officers were selected: President, George A. Banker; vice-president, W. W. Gawthrop; treasurer, W. F. Rudolph; secretary, H. D. Le Cato. The election of a board of directors was deferred until the next meeting.

The association will apply for a charter and select permanent quarters. Its purpose is to seek to inject life and vigor in all matters pertaining to automobiles and motor boats.

BOUGHT OIL WITH BODY

But it Proved to be too Heavy to Lubricate Properly—Where it Came From.

"When you buy cylinder oil you want an oil that has some body to it, but the other day I ran across some that had rather more body than was necessary," remarked a motorist the other day.

"I was out not long ago, and through some oversight an insufficient quantity of cylinder oil had been put in the reserve can. Consequently I had to stop at a wayside shop and buy a small quantity of what the proprietor termed automobile cylinder oil. He got it out of a can that was stowed away in a corner among odds and ends that apparently had not been disturbed for weeks—perhaps months. It was covered with dust, and when the man drew the cork out and tilted it to run the oil into a measure, nothing came forth. 'Empty,' I said to myself. But the man knew better, and presently a semi-liquid substance began to ooze from the orifice. It was most uninviting looking stuff; almost coal black and of about the consistency of molasses in winter time. It scarcely seemed to flow at all, but finally the measure was full, and with inward misgivings I poured it into my engine.

"It did some good, for it got me home without heating the engine. But what a time I had getting it out! I opened the drip cock, but instead of the usual generous stream pouring forth, there issued, slowly, a globule of thick, dirty, vile smelling stuff that made one shudder to look at it. I left a pan under it, and for a couple of days thereafter it kept on dripping. Then I flushed it with gasoline, and after a long time I got the cylinder and crank chamber cleaned out. Thereafter I made it a point to see that my can of lubricating oil was always filled."

Leave Plenty of Wire.

Broken wires, or wires detached from the terminals, account for a good many roadside delays. The insulating wires are not infrequently found stretched like the wires of a piano, and, of course, the vibration of the car causes frequent breakage. This is the more annoying in that such wires when broken are always too short to repair. Leave, then, always more than enough of all your wires, and you will not be troubled by their breaking; but if by chance they should give way, there will be enough spare wire to repair the damage. Have always with you a piece of insulating rubber tape, a piece of bare wire or a binding joint.

Sell Lots to Raise Factory Funds.

Some unnamed Chicago people propose to start an automobile factory in Lincoln, Ill. The Business Men's Association of that place may sell town lots to raise money to establish the factory. This is a much better plan than, to raise a bonus, it is naively remarked.

GENESIS OF JOINTS

**They are Necessary Evils in Modern Motors—
Proper Materials for Making Them.**

Joints are numerous—often unnecessarily so—in most modern motor designs, and any improvements which reduce their number or size—as the frequent practice of casting cylinder and cover in one piece, or that provide for ground joints without packing—are to be welcomed, provided that they do not involve castings being too complicated or necessary renewals being costly; but some will be inevitable in any design, and the materials available for making them should be considered.

Of these the principal are soft metals, fusible or infusible, as lead and copper; asbestos, in the form of soft or hard sheet string, and sheet of a third variety on a wire gauze base and containing some rubber admixture, which, though used for steam pipe joints, is to be avoided for most motor car purposes; leather rubber, and finally the old familiar hemp and red lead, which latter is mixed with an equal part of white lead and made into a thick paste with linseed oil, and is always useful when making screwed unions in pipes which do not have to be often dis-united.

The selection of these will depend on the purposes of the joint, whether it has to resist high temperatures, steam heat only, water, oil or gasoline; and the best joint of all is one in which no packing is needed, i. e., when the surfaces can be got to such a degree of truth that when drawn together with only a smear of oil or red lead, or even without this, a tight union is obtained. This may be done easily and cheaply by grinding when the surfaces are not large and studs or other projections do not interfere with the necessary rotation of one surface on the other; while when this is impracticable it must be done by scraping, which, though an expensive method, requiring some skill, would repay its more frequent employment. In default of this, packing is necessary, and the most usual material for this is asbestos, the chief objections to which are its fragility, necessitating care in handling and the fact that it does not stand water well, though unaffected by heat or dry steam.

One principle to be borne in mind when making joints is that the thinner the packing is the better, and the thin hard blue asbestos sheet is, on the whole, most satisfactory, especially where a water joint is unavoidable. For this purpose it should be soaked in linseed oil or smeared with tallow, and may be also blacklead on each surface to render its removal easier when the joint is to be remade; but with a difficult joint this is better omitted.

Blacklead has an awkward way of forming hard concretions on iron surfaces which are very adherent, and the greatest care must

be taken in removing such, with any fragments of old packing, especially about the bases of studs, etc., before beginning to make a joint, and clearing out the grooves usually present to retain the packing. Bolt holes should be punched (or, better, cut with small curved scissors) amply large and burrs of asbestos round them avoided, while there should be no broken lines or folds in the sheet. Where the bolts are light or few in number, the softer white asbestos may be employed, and screwed up at intervals, allowing time before the engine is used again. For combustion joints only, the asbestos may be used plain or rubbed with a little blacklead and grease.

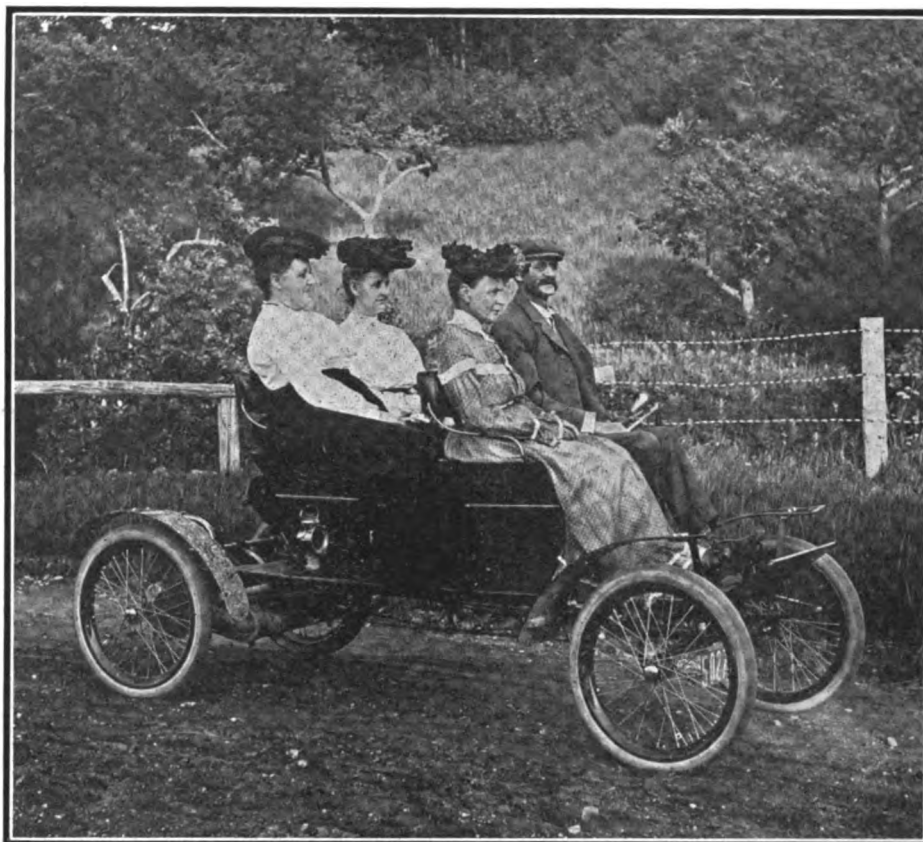
A useful packing is made of asbestos cov-

AUTOS FOR BAGGAGE

Pennsylvania Railroad to Try Self-Propelled Vehicles at Jersey City and Washington.

At last the Pennsylvania Railroad is to try the experiment of using automobile baggage trucks. The trial will be made at the company's Jersey City terminal, where horses are still employed to draw the trucks. It is understood that if this method of handling incoming and outgoing baggage proves successful these trucks will be put into operation at the new union station in Washington.

The station at Jersey City is double-decked,



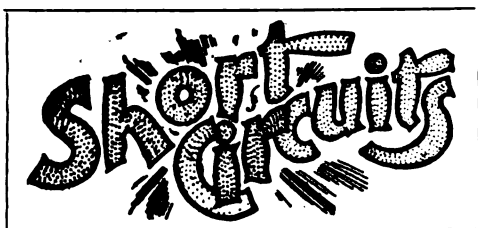
AN ORIENT SURREY FILLED WITH WALTHAM PEOPLE.

ered with thin copper where small joints only are concerned, but it is not easy to get sufficient pull on it safely in the case of a large area. In small engines, where such a joint is used for the cylinder head, it is frequently left too broad, and cutting it down to about one-eighth or three-sixteenths will enable a better joint to be made without excessive pull on the bolts.

Trolley Company's Auto 'Bus Line.

President Meyer Schamberg of the West Chester (Pa.) Street Railway Co., announces that an automobile will be put in operation to carry passengers on the Coatesville extension, between Caln Station, east of Coatesville, and Gallagherville, west of Downingtown. This is a distance of about three miles, over a portion of which the trolley company has not yet secured rights of way.

with the train floor upstairs. The truck is loaded down below, runs onto an elevator, rises to the train floor and starts up the platform at a good pace until the baggage car is reached. Here it runs close alongside the door, and the trunks are handed in the door with very little effort and an absence of "smashing" that is so prevalent when they must be lifted from the platform or low trucks. The work of unloading a car is perhaps more noticeable, as there is no need or reason for dropping them out of the car door to the platform. The floor of the truck being of the same height as the car makes hauling of baggage an easy matter. The trucks will be of the electric type, and, being rapid movers, will save delay to a train where baggage is late. They are capable of turning in their own length, are noiseless and odorless, being driven by storage batteries.



Automobilists of Akron, Ohio, are about numerous enough to form a club, and plans for one are being discussed.

Judging from the violence and intemperance with which Magistrate Cornell, of New-York, manages his tongue, what sort of an automobile operator would he be?

Under the Jacksonville, Fla., ordinance, which became operative on June 29, fifty-nine automobiles have been registered by residents of that town.

Pittsfield, Mass., motorists are endeavoring to secure a new racetrack. Subscriptions were solicited at a recent meeting of the Berkshire Automobile Club.

Better streets are demanded by the Salt Lake City (Utah) Automobile Club. A long list of streets in need of repair is cited in support of the complaints.

Mr. and Mrs. F. H. Nicholl, with their son and daughter, left Columbus, O., last week for a three months' tour of the West, including a visit to the St. Louis Fair.

"The Dallas Auto Club of Dallas, Tex., has been incorporated by Groce Scruggs, J. D. Schofield, John Hunter and others."—Galveston News. "Auto Club!" What's that? But what is the matter with Groce Scruggs?

The Chicago Record credits Magistrate Cornell, of New York City, who cries "Shoot 'em," with being a "petty judge at Bayside, L. I." The location is wrong, but no one will find fault with the adjective.

There is talk in Detroit's official circles of providing the police with fast flying automobiles with which to pursue speeding motorists. Thus one set of lawbreakers will be set to arrest another set.

Springfield, Ill., motorists have effected a temporary organization and appointed a committee to draft a constitution and by-laws. It is proposed to make the organization permanent at the next meeting.

Horsemen are getting more and more reconciled and the equines and motor cars are mixing company as exhibitors at many fair grounds this summer. It is getting quite common now to read of "Trotting and Automobile Races."

A Brooklyn, N. Y., girl has obtained a verdict of \$2,631 for damages sustained through being knocked out of a carriage by a collision with an electric cab. It was explained to the jury that "Bill" Devery was in the cab.

It used to be a trick of wild cow punchers to ride into a barroom on their horses and get a drink without dismounting. An automobilist recently tried the same trick in a touring car at the Iroquois Hotel, Buffalo. No shooting occurred.

A new point of serviceability for a canopy top has been discovered by Joseph Uihlein, of Milwaukee. In trying to avoid a collision he overturned his touring car. Had it not been for the top, the car would have turned completely over and pinned the passengers beneath it. As it was, all escaped unhurt.

An automobile was used to save two lives at Fort Wayne a short time ago. It took three physicians on a fast run to operate on a man and a woman, who were seriously ill. The drive was made from Fort Wayne to Albion. A short delay would have been fatal.

It is thought that the San Diego-Los Angeles (Cal.) record has been put to where it will stay for a while. Last week Frank De War, of the latter place, drove a White steam car between the two cities in nine hours, actual time. This is three and one-half hours better than anything previously done.

There are now 5,840 automobiles in Massachusetts. The Massachusetts Highway Commission has during the last six months had \$10,130 added to the treasury from the automobile income. This has been secured from the granting of licenses to chauffeurs and dealers.

Ten thousand dollars in cash and trophy prizes will be offered at the forthcoming automobile and horse meet at Minneapolis, Minn., which is set for August 17 and 18 at the Hamline track. The Minneapolis Automobile Club and the Minneapolis automobile dealers are working to advance the interests of the event.

Kansas City has an ordinance pending restricting the speed of automobiles to eight miles an hour, and meantime the local club has arranged to take the aldermen out for a ride in motor cars and let them see what that sort of going is like. The club hopes to get a limit of twelve miles an hour on boulevards.

One one-thousandth of the population of Des Moines, Iowa, owns automobiles. That is to say, there are 72 automobiles and 72,000 people, the number of the former being disclosed by the new State registration law. It is estimated that more than one-half of the machines were purchased this year.

Between times, Alfred Adams, an Atlantic City, N. J., bathhouse keeper, has exercised his ingenuity in devising an electric storage battery for automobiles. He claims to have run an automobile equipped with it 140 miles without recharging. His claims are looked upon with skepticism, however, even by his friends.

The Automobile Club of France is instituting a campaign against certain types of engine lubricators, which, by allowing the pistons to be too liberally oiled, cause the exhaust to be expelled in dense clouds of evil smelling smoke. The action of the club is understood to be prompted by the authorities.

The Camden, N. J., pike leading from Philadelphia to Atlantic City has been so much used for scorching of late that the Camden County authorities have determined to stop it. The county prosecutor has been authorized to have the road patrolled by detectives in automobiles of recognized speed qualities.

In Chicago the wheel of an automobile going very slowly hit the rear of a carriage very gently. The horse became frightened and began to kick. He broke the carriage and harness and kicked a child, who was one of the occupants of the carriage, fracturing her frontal bone. The driver of the automobile was arrested. The horse was taken home and fed.

Automobiles promise to play a prominent part in the campaign in Wisconsin this summer and fall, where, as is well known, the contest will be a bitter one. Announcement is made at the La Follette headquarters in La Crosse that the Governor will make a tour of the State in an automobile to be furnished by his admirers, in order that every hamlet may be visited. He will start out on his trip early in the campaign.

Robert Roof, aetat nineteen, is the boy wonderful of Muncie, Pa. He has made a "complete automobile," not by purchasing the parts and putting them together, but by making it in its entirety. He calls it the "electromobile," as it goes by electricity, and it is capable of running thirty miles an hour. When he gets all its parts completed it will run twice that fast, so a Muncie chronicler avers.

Promoters of bicycle racing should watch the police reports in order to get new record-breaking stars. A bicycle policeman in a Pennsylvania town swears that he chased and caught an automobile going more than thirty miles an hour. That's fair for anywhere near Philadelphia, but an English bobby on foot ran and caught one when it was going fifty miles an hour last fall. There are great athletes on the force.

A war cloud has arisen. The chauffeur of Jules Bœufve, Assistant Commissioner General of France to the World's Fair at St. Louis, was arrested and fined \$10 for speeding last week. Mr. Bœufve, when the fine was imposed, exclaimed: "It is disgrace on the part of the American government to arrest a representative from the great government of France and haul him into a police station. If there is any redress, I shall try to get it."

To Hold 1,000 Miles Endurance Run.

An eight-day endurance run between San Francisco and Los Angeles, Cal., a distance of 1,012 miles, is being planned by motorists of those cities. L. P. Lowe, chairman of the executive committee of the Automobile Club of California, recently drove to Los Angeles, where he went to consult H. C. Brow, chairman of the racing committee of the Automobile Club of Southern California. The visit resulted in nearly all the conditions of the run to Los Angeles being agreed upon.

Under the speed limit, which is not to exceed fifteen miles an hour, it has been figured that the round trip will require 3,600 minutes elapsed time. Each car will start with this credit, and penalties will be imposed at the rate of one point for each penalized stop of one minute. During the day's run three stops will be allowed, and no penalties will be imposed for stops from tire trouble. To encourage the taking of photographs, stops for this purpose will not be penalized. A stop of thirty minutes will be allowed at the noon hour and one of fifteen minutes each in the forenoon and afternoon. It is planned that the run will take four days each way. The starts will be made at 8 a. m. each day, and the present schedule makes the longest possible run in a day 140 miles.

During Lowe's observation trip to Los Angeles he measured all the principal distances and grades. By the road to be followed the distance to Los Angeles is 506 miles. The first day's run will be to Salinas, the second to San Luis Obispo, the third to Santa Barbara and the fourth to Los Angeles.

Motorists to Fight Turnpike Company.

West Virginia motorists have a fight on their hands with the Martinsburg and Winchester Turnpike Co., Martinsburg, W. Va. Some days ago the company placed an additional toll of two cents a mile on all automobiles, and limited their speed to ten miles an hour. If accidents occur and it can be proved that the automobilist did not go to the extreme right of the road and stop in case of a frightened horse, the former will be held responsible for the damages that ensue, and not the turnpike company. It is said that the other pike companies around the city, of which there are three, will follow suit.

The motorists have organized and are determined to fight the rule by legal proceedings. There are about twenty machines in the town, and this pike is a favorite road.

\$4 per Minute his Charge.

How much is it worth to be seen driving an automobile with a coroner sitting beside you? Coroner Blauvelt, of Paterson, wanted to get to the scene of a railroad accident and hired Andrew Fletcher to take him in an automobile. It took just twenty-four minutes to make the trip, according to the coroner. Fletcher has put in a bill for \$96. That is only \$4 a minute, but the coroner says it is too much. The county physician and two newspaper reporters rode with the coroner. They all propose to sit on Fletcher.

New Cars Require More Oil.

"In running a new car you need to pay particular attention to the lubrication of the engine," said an old hand at the game of motoring. "Not only is more oil needed than will be in the case after the engine has been run a few hundred miles, but it is also necessary to draw off the used oil more frequently.

"After a few days' or weeks' use the working parts become saturated with the lubricant, and when a fresh supply is put in, little, if any, of it is soaked up by the pistons, etc., and it is able to perform its function of lubrication undiverted. When the engine is new, it is just the other way, and until every part is thoroughly saturated, the work cannot be performed properly. You can count, therefore, on using probably 25 per cent. more than the normal quantity of oil at first.

"Not only this, but, as I said, you should draw it off more frequently. When the engine is first run metallic particles collect in the cylinder and mix with the lubricant; the mixture is then churned with the upward and downward passage of the piston, fresh quantities of this scale being constantly added. Not only does this wear the metal parts, but it detracts from the lubricating properties of the oil. There is more tendency for the engine to heat than there would be if the lubricant was free from the impurities mentioned. By opening the drip cock and drawing off the mass, and repeating the operation several times, you get rid of these metallic particles and finally have a well lubricated engine, which runs smoothly, with little wear, and develops the full amount of power."

Chain Clicks the Only Sound.

A big, red-bodied tonneau car swept by, travelling at a 12 to 15 miles an hour pace, with a load of fashionably dressed people, evidently on their way home from the races. The most noticeable thing about it was its absolute silence. People often speak of a silent car, meaning thereby one that is silent by comparison with the average gasoline car. That means, of course, that there is considerable noise.

"Did you ever hear anything so quiet," remarked the Motor World's companion, somewhat after the fashion of the bull-making Irishman. "There is not a sound from the engine."

This was literally true. Above the noise of the street the only sound was the click of the chains passing over the sprockets. The ear could not catch the faintest sob of the exhaust or the sharp staccato sound of the opening and closing valves.

Chicago Insurance Men Fix Rates.

The Chicago Underwriters' Association, at its quarterly meeting last week, adopted new automobile rules and forms. A rate of 2½ per cent was made to cover a machine anywhere in the United States or Canada, while in use or in transit. A lower rate was made on machines confined to Cook County, ranging from 1 per cent upward, according to motive power.

Why Eight Cars Rot in Africa.

A curious tale of governmental red tape comes from Paris. It concerns eighty large motor cars, built to carry both passengers and goods, which are now lying rotting in the French government sheds at Kayes, on the banks of the Senegal. The cars were impounded four years ago by the colonial government, and the owners of the cars are now claiming \$900,000 damages from the French government.

In 1898 M. Dacrales, Minister of the Colonies, went on a tour through the French Soudan, and while there he signed, on the recommendation of the government, a concession granting the right to a motor car company to carry all the government stores and material throughout the colonies as soon as the necessary roads should have been constructed.

The concessionaires, on the other hand, were, by the end of 1899, to provide eighty motor cars, with a staff of chauffeurs. Soon afterward, however, the French Soudan was annexed to Senegal, and the government of the Soudan took no further interest in the making of roads. Eventually, on the representations of the motor car owners, the government allowed a sum of \$10,000 to build a road for which \$200,000 was required. The road, of course, was not laid out.

When the eighty motors and four thousand barrels of gasoline arrived, the owners found there were no roads, only a thin track in the sand, over which it was impossible to drive a car. Under the pretext that the company was not carrying out its contract, the government at once impounded the eighty motor cars and the barrels of gasoline, and threatened to imprison the chauffeurs unless they went back to France at once.

Big Cup Race Deficit.

As a result of the lavish methods employed in connection with the running of the Bennett Cup race, the German Automobile Club is threatened with a deficit of between \$30,000 and \$35,000.

The receipts in connection with the race were only about \$35,000, whereas the costs, including the Saalburg grandstand, erected at an expense of nearly \$25,000, will probably nearly be double that amount. Several sources of anticipated revenue by the club brought in no result whatever. The exhibition of the competing cars was abandoned, as only one vehicle, it is stated, was in place to take part. In like manner, for want of entries, the subsequent battle of flowers was struck out of the programme.

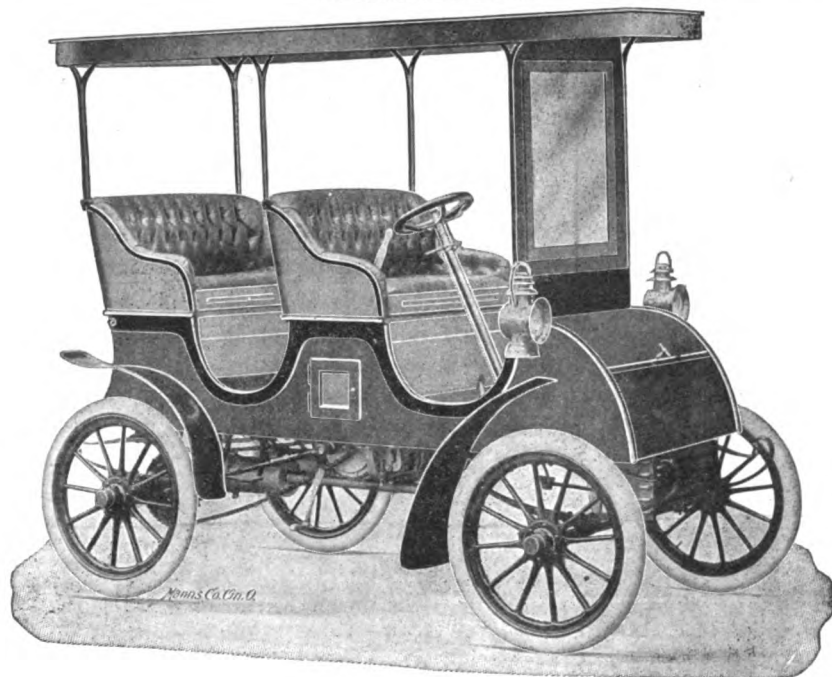
Saginaw's Curious Ordinance.

Alderman Vance, of Saginaw, Mich., whose desire to have motorists held strictly to account has been referred to in these columns, has at last got his ordinance in shape and presented it to the City Council. It contains some curious clauses. Among these are numbers six inches high and four inches wide, to cost \$3 each; the setting aside of certain streets for speeding purposes, and an age limit for drivers. Under the latter no person under sixteen years of age is permitted to "drive or propel" a motor vehicle.

A machine of Simplicity and Power.
Built by

THE SCHACHT MFG. CO.

CINCINNATI, O. U. S. A.



Two-seated Surrey or Tonneau style with top \$1075, opposed cylinder engine, 12 horsepower. Plate glass front \$25 extra.

This car is the simplest, strongest and best machine on the market for the money. Write us for catalogue, and we know we can interest you.

The Week's Patents.

764,676. Wheel for Vehicles. Alphonse Prouvost, Tourcoing, France. Filed December 16, 1903. Serial No. 185,410. (No model.)

Claim—1. In a wheel the combination of a rim, a hub comprising two lateral plates and bolts connecting said plates, a plurality of circularly bent spring spokes having their ends formed as eyes adapted to surround said bolts at diametrically opposite points and in different planes and means for attaching the spokes of the rim, substantially as described.

764,727. Radiator for Cooling Fluids. Thomas B. Jeffery, Kenosha, Wis. Filed March 2, 1903. Serial No. 145,723. (No model.)

Claim—1. A device of the character described, comprising a plurality of tubes, each tube having enlarged ends directly united to the enlarged ends of the adjacent tubes, the portion of said tubes between their ends being reduced in diameter, thereby forming a circulating space around the tubes.

764,737. Motor Vehicle. Edward S. Lea, Rutherford, N. J., assignor to the Turbine Electric Truck Co., New York, N. Y., a corporation of New York. Filed September 1, 1903. Serial No. 171,477. (No model.)

Claim—1. The combination of a vehicle body, rear and forward trucks, the rear truck carrying the driving wheels, a draft bar connecting the rear truck and the body and extending rearward, and a draft bar connecting the forward truck and the body and extending forward, whereby the rear truck pulls the body and the body pulls the forward truck.

764,840. Speed Regulator for Explosive Engines. John C. Crocker, Grove City, Pa.,

IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours
CHICAGO 24 hours



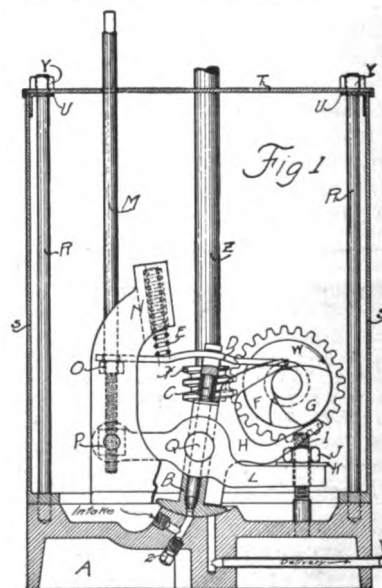
Baltimore 5 days.
New York 4 days,
BOSTON 5 days.

We are supplying the largest
Manufacturers—WHY?

THEY GET THE WHEELS.

IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.

THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.

assignor of one-half to H. B. Heaslet, Grove City, Pa. Filed August 20, 1903. Serial No. 170,114. (No model.)

Claim—1. In an explosive engine having a slide valve for controlling the mixture passing into the cylinder, the combination of an eccentric rod, a valve rod aligning with said eccentric rod, a member fixed to and carried by the free end of said eccentric rod, a revoluble member carried by the free end of the valve rod engaging with said eccentric rod member, and a governor adapted to rotatably adjust said valve rod member to vary the movement of said valve, the engaging surfaces of said members being inclined, as shown and set forth.

764,801. Wheel. Charles E. Hequembourg, Chautauqua, N. Y. Filed December 17, 1903. Serial No. 185,567. (No model.)

Claim—1. In a wheel, a clincher tire, a clincher rim in a plurality of sections surrounding said tire, and bolts for tightening the sections of the rim upon the tire.

2. In a wheel, a clincher tire, a clincher rim in a plurality of sections surrounding said tire and transversely arranged bolts for tightening the sections of the rim upon the tire.

764,803. Means for Cooling Internal Combustion Motors for Automobile Use. James H. Jones, Bristol, and Fred H. Bogart, Hartford, Conn., assignors to the Corbin Motor Vehicle Corporation, New Britain, Conn., a corporation of Connecticut. Filed January 18, 1904. Serial No. 189,430. (No model.)

Claim—1. In a cooling apparatus for an air cooled motor of the internal combustion type for use on motor vehicles, a motor, a horizontal open front air conduit for conducting a natural draught of air, the cylinder portion of said motor being arranged within said conduit, mechanical means arranged laterally of said passage through said conduit and adjacent to the cylinder portion of the motor to supply an artificial draught of air supplementing and building up the natural draught and drawing said air from a source other than that which supplies the natural draught.

764,806. Gearing. Hiram P. Maxim, Hartford, Conn., assignor to Electric Vehicle Co., Hartford, Conn., a corporation of New Jersey. Original application filed June 3, 1896; serial No. 594,058. Divided and application filed April 15, 1902; serial No. 102,960. Again divided and this application filed August 20, 1903. Serial No. 171,185. (No model.)

Claim—1. In a motor vehicle, the combination with a driving shaft, means to actuate said driving shaft and a driven gear of a gear mounted to rotate freely upon said shaft and meshing with said driven gear, an internal gear carried with said gear, a shell or drum mounted to rotate freely upon said shaft, a pinion carried by said shell or drum to revolve about said shaft, a driving pinion fixed to said shaft engaging said first named pinion, and means to retard the rotation of said shell or drum.

764,936. Pneumatic Tire. Harry G. Fittler, Philadelphia, Pa., assignor to the Good-year Tire & Rubber Co., Akron, Ohio. Filed November 28, 1903. Serial No. 182,963. (No model.)

Claim—1. The combination with an inner tube, of an inclosing outer tube provided at determinate points with constricting bands in the body portion thereof arranged to contract said outer tube about a tire rim, of wedge shaped rings adapted to bear against the under side of said outer tube, and the iron tire on which said outer tube seats, and mechanism to compress said wedge shaped rings toward each other and against said outer tube.

764,967. Tilting Steering Wheel. Thomas W. Warner and Hugh L. Warner, Muncie, Ind., assignors to Warner Gear Co., Muncie, Ind. Filed December 31, 1903. Serial No. 187,373. (No model.)

Claim—1. In a tilting steering wheel, the combination with a rim, of a spider attached to the rim, a supporting member engaging said spider, a pin projecting through said supporting member and engaging ears on said spider, a locking pin substantially in axial alignment with said supporting member and adapted to engage with it.

2. In a tilting steering wheel, the combination with a rim, of a spider attached to the rim, there being a hub projection on said spider, a plunger mounted in said hub, means for holding said plunger in engagement, ears projecting below said hub, a supporting member pivotally mounted between said ears.

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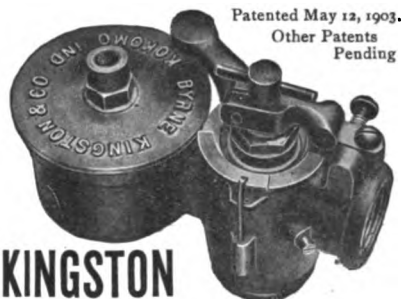
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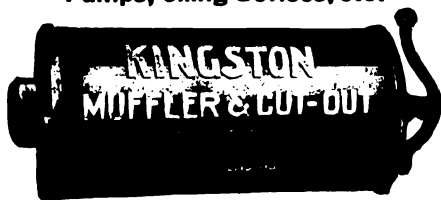
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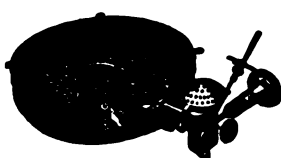
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Want all Laws Enforced.

On the theory of what is sauce for the goose is sauce for the gander, Jacksonville (Fla.) motorists, who have been complying with the new city ordinance requiring all motor vehicles to be registered, numbered, carry horns or gongs and lights, and not to exceed certain speed limits, are up in arms over the non-enforcement of other city ordinances.

The tires of many automobiles have been punctured by broken glass, nails and wire scattered on the streets of the city. Those who have suffered from such damage to their vehicles call attention to the following section of the city code:

"Section 272. No person or persons shall place or cause to be placed on any pavement or road of this city broken glass, nails, tacks, wire or other material that may damage passing persons or vehicles."

Wanted Autos Barred From Cemeteries.

A lively interchange of arguments took place last week at the meeting of the Sandusky (Ohio) Board of Public Service, the bone of contention being the presence of automobiles in cemeteries. It was contended by F. J. Leser, a member of the board, that they should be excluded altogether, if only as a matter of precaution.

His arguments were vigorously combatted by J. J. Hinde, another member of the board and also a motorist. He said that horses ought to be left outside the same as automobiles. Continuing, he said it is only a few years ago that bicycles scared horses, and there was talk of preventing people from using wheels, but the horses have become used to the wheels, and now are not afraid of them.

No action was taken in the matter.

Souther's Prophetic Declaration.

"The day will come when you will take them down," was the prophetic remark of Commissioner Souther, of the Hartford (Conn.) Water Board, last week, when it was proposed to exclude automobiles from the reservoir road on certain days of the week, and erect signs to that effect. In spite of his opposition, and his remark that there were more women afraid of automobiles than there were horses, a resolution to exclude was passed. The days on which automobiles are barred are Sundays, Tuesdays and Thursdays.

Better Not..

have any ignition outfit than to have a poor one.

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For 1905.



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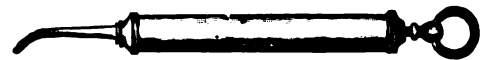
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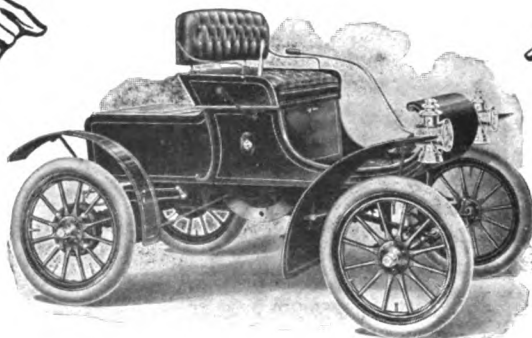


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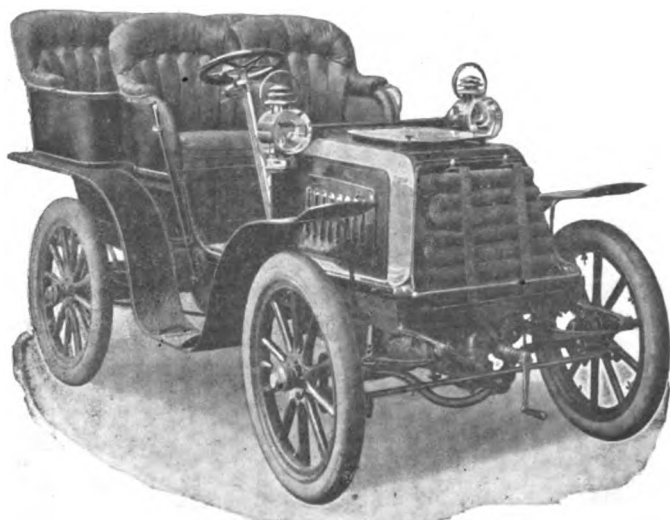
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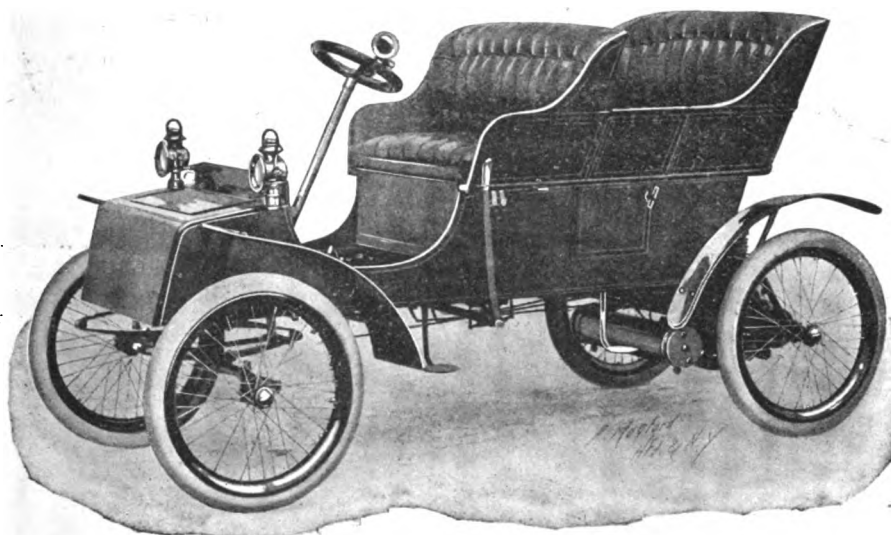
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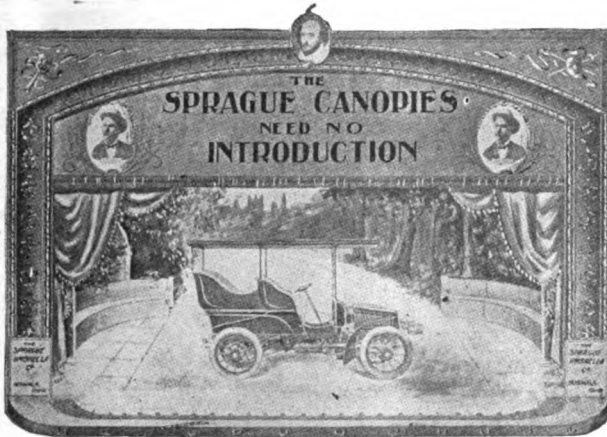
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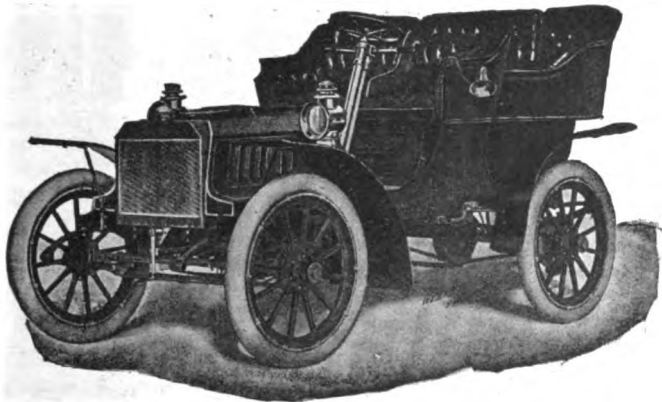
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Or, if you have your machine now, have your DEALER
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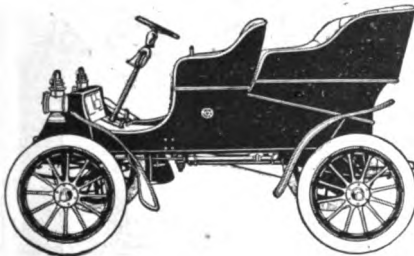
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Wheel or lever steerer.	Every part instantly accessible.
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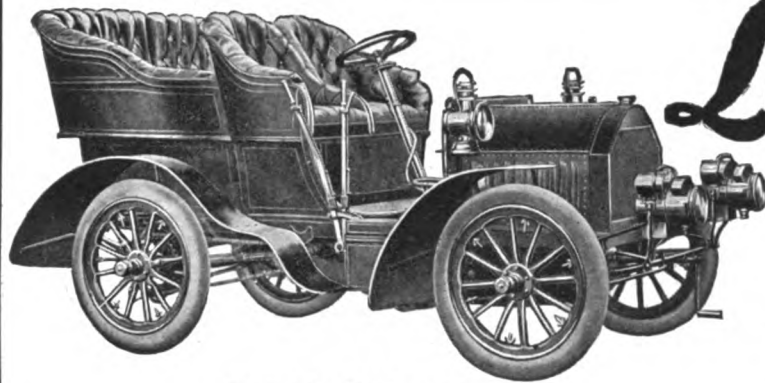
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If so, Communicate with us.

"EASILY THE BEST BUILT CAR IN AMERICA."

PRICES, \$2100 upwards.

The Locomobile Company of America, Bridgeport, Conn.

BRANCHES
NEW YORK, 76th St. and Broadway. CHICAGO, 1354 Michigan Ave.
PHILADELPHIA, 249 North Broad St. BOSTON, 15 Berkeley St.
Member Association of Licensed Automobile Manufacturers.



Hotel Lenox

Boylston and Exeter Streets
Back Bay, BOSTON

ONE OF THE FINEST MODERN
FIRE PROOF HOTELS IN THE
COUNTRY. TWO MINUTES'
WALK FROM THE BACK BAY
STATIONS, AND ONE BLOCK
FROM COPLEY SQUARE

CHARLES A. GLEASON, Manager
Send for illustrated booklet

NORTHERN AUTOMOBILES

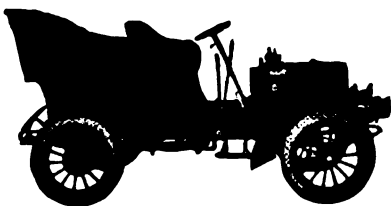


Northern Runabout
6½ Horse Power, Price \$750

Handsome outline and finish that appeals to
the customer; convenient box under front dash
for storm apron, tools, etc. All working
parts enclosed and dust proof; most silent
operator extant.

NORTHERN MANUFACTURING CO.
Detroit, Mich., U. S. A.

Member National Association Licensed Automobile Manufacturers.



The YALE \$1600

THE YALE WILL MEET THE REQUIREMENTS OF MORE PROSPECTIVE
PURCHASERS THAN ANY AUTOMOBILE ON THE MARKET.

You can offer a prospective purchaser more for his money in the Yale than in any other automobile made.

You can offer and guarantee him a degree of Efficiency, Dependability, Luxury and Simplicity of operation
to be found only in other cars costing twice as much.

The Yale provides what nine out of ten automobile purchasers want. A roomy, comfortable-riding, beautiful appearing family touring car with power sufficient to overcome all road difficulties and to develop a rate of speed that will satisfy any desire to "ride fast."

Send for new catalogue and investigate the Yale at your first convenience.

THE KIRK MANUFACTURING COMPANY, 950 Oakwood Avenue, TOLEDO, OHIO.

Member Association of Licensed Automobile Manufacturers.

Peerless

THE CAR OF ACHIEVEMENT

CHAS. G. WRIDGWAY'S
NOTABLE DOUBLE
ROUND TRIP BE-
TWEEN NEW
YORK AND
BOSTON,
JULY 12th -
14th - - - -

OVER 1,000
MILES OF
TRAVEL IN
65½ HOURS,
ELAPSED
TIME.

From four to six people
in the car at all times.

650 MILES
without stop-
ping the
Engine.

Here a stop was
necessary to re-
move some waste
which had become
lodged in the car-
bureter.

This trip, made under the surveillance of impartial observers, was a convincing demonstration of the reliability of the Peerless Car. Performances of this kind, together with the repeated successes of the Peerless on the race track and in the recent "Climb to the Clouds," have stamped it beyond question as America's foremost car and comparable with the finest imported machines of similar power.

Member Association Licensed Automobile Manufacturers.

PEERLESS MOTOR CAR CO., Cleveland, Ohio.



Detroit Mail & Ad. July 19, 1904.

Badger Brass Mfg. Co.,

Kenosha, Wis.

Dear Sir:-

We have noticed in one or two of the trade papers an advertisement of a certain lamp manufacturer intended to mislead the public regarding your lamps with which our thousand mile non-stop car was equipped. The machine had traveled 323 miles in perfect shape. The difficulty with the lights themselves was not in any way due to structural defect, but was probably caused by the rubber hose connections to the generators, which were situated in the rear of the car, being accidentally loosened in the dark by the men on the car. The men themselves feel confident of this, because the light burned very bright and strong and then went out suddenly, which would not be the case if the generator had failed to operate, and was certainly not due to the wind, as the number of miles covered on previous tests of the lamps thoroughly demonstrated to us. The advertisement above mentioned is of such a misleading character that we felt it due to you to make this statement.

Very truly yours,

PACKARD MOTOR CAR COMPANY,

B. D. Pearson
Manager Sales Department.

827/20

Trust Their lives with SOLAR LAMPS to "show the way."

This letter must answer finally any misleading statements made regarding this case. With this clear cut statement before the public further words from us would appear unnecessary.

That **Solar Lamps** are selected for such tests shows unmistakably that they rank **first**.

BADGER BRASS MFG. CO., Kenosha, Wis.
EASTERN OFFICE: 11 Warren St., NEW YORK.

Extract from the MOTOR AGE of June 11th, 1904:

"Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class."

This was a stock

Rambler

the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue "W" fully describes all models, and our booklet "A Little History" gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

THOMAS B. JEFFERY & COMPANY,
KENOSHA, WISCONSIN.

BRANCHHOUSES: { Chicago, 302-304 Wabash Avenue.
Boston, 145 Columbus Avenue.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, August 4, 1904.

No. 19

INVITATION TO RESIGN

**Diplomatically Conveyed to N.A.A.M. Associates
—"Our Door is Open," Says M. & A.M.**

What practically every one has deemed desirable, if not inevitable, is now in a fair way of coming to pass—the separation of the parts and accessory makers from the National Association of Automobile Manufacturers. From the beginning the former were limited to associate membership, and had no voice or vote in the affairs of the organization. The payment of \$25 per year was about the only privilege they enjoyed.

The automobile manufacturers long since recognized the injustice of such procedure, and when the association became a corporation the associate membership feature was retained for legal reasons, though it was tacitly agreed that no additions to that membership would be made; as evidence of the sort, several applications were tabled indefinitely.

The formation of the Motor and Accessory Manufacturers by those who recognized the logic of the situation supplied an easy way out of the difficulty, if it may be so termed, and as that organization has now attained strength and standing, the N. A. A. M. has moved in a manner that will add to its strength. After conference with the officials of the N. A. A. M., President Post of the M. and A. M. has issued a formal invitation to the associate members of the Automobile Association to resign from that body and join with his organization. In short, through Mr. Post, the N. A. A. M. is diplomatically asking all those of its members who do not manufacture complete automobiles to step down and out and thus relieve the embarrassment. Mr. Post's communication explains the situation very clearly. He says:

"At the various conferences it seemed apparent to the officers of both organizations that the advent of the Motor and Accessory Manufacturers has made the associate membership feature of the N. A. A. M. unnecessary.

"It was urged by the M. & A. M. officials that, since a substantial association of parts

and accessory manufacturers now exists, the N. A. A. M. should become exclusively an organization of complete automobile makers, and should confer and deal with the M. & A. M. as a body rather than occasionally to consult with a few individual associate members who are allowed neither voice nor vote in their deliberations. The N. A. A. M. officials promptly concurred, admitting that a strictly parts and accessory association could better care for the interests of parts and accessory makers, and stating that they would prefer to eliminate their associate membership list and on matters of mutual concern deal with a responsible independent association.

"It is our desire, therefore (and I beg to say that this letter is written with the full knowledge and approval of the officers of the N. A. A. M.), to ask all parts and accessory makers who are at present associate members of the N. A. A. M. to join the Motor and Accessory Manufacturers. If they do this, all members of the M. & A. M. who are associate members of the N. A. A. M. will then resign from the latter organization, and the two distinct organizations—one representing the complete automobile makers exclusively, the other representing the parts and accessory makers exclusively—will be in the field, and both the separate and common interests will be well cared for and guarded. 'Harmony' will be the policy and combined action for the best interests of the entire industry the aim of both organizations.

"In suggesting abandoning associate membership in the N. A. A. M. for active membership in the M. & A. M., we are offering you an opportunity for exchanging voiceless membership in an organization essentially of makers of complete automobiles, that prefers to eliminate its associate membership list, for a place in an aggressive, strong and exclusively parts and accessory organization, whose interests are your interests, and in the direction of whose affairs you may take an active part."

Globe Buys Out Konigslow.

The business and goodwill of Otto Konigslow, Cleveland, Ohio, who manufactured a number of automobile parts, has been purchased by the Globe Stamping Co., of the same city. The production of the parts will be continued at the Globe factory.

FINE OLD ROW IN BOSTON

**Local Trade at War Over Show Profits—N.A.A.M.
Must Decide—Story of the Rumpus.**

The Sacred Codfish in the Boston State House may well quiver, the shade of Paul Revere stir uneasily and the Ancient and Honorable Artillery Company gird up its loins and take up yet another notch in its belt and another glass in its hands as it bravely and redoubtably mans the ramparts of historic Fort Parker.

The cause is found in the holding, and by whom, of the next Boston automobile show. The situation is somewhat complicated. On the one side the rallying cry of "All the show profits for all the trade!" is defiantly answered by the "We've got the cards, and what are you going to do about it?" of the other.

To be more explicit, the show, be it known, has heretofore been held by the Boston Automobile Dealers' Association. The profits have been large, for the Hub shows have been second only to New York in point of attendance, and the gain has been distributed among the members composing the association, bringing joy, and in several cases disputes and even lawsuits to some branch store managers, whose unfeeling home offices could not be made to see that the "velvet" rightfully belonged to their representative instead of the company he represented.

That this last question, among others, might be settled, it is charged that during the show last year two branch store managers, together with a third confederate, quietly secured a three years' option of Mechanics' Hall, which fact was promptly discovered when, a few days later, the chairman of the show committee went to see about renewing the lease for this and following years. Clouds gathered quickly, the chairman, W. E. Eldridge, going so far as to refuse to sign the necessary checks dividing the profits of last year unless the lease was turned over to the association. The storm that then threatened was averted by, so it is said, the disclaimer on the part of the lessees that any sharp work was intended and the assurance that the lease would be turned

LICENSED AGENCY PLANS

Rules by Which the A.L.A.M. Will Seek to Control and Protect Dealers.

over to the association at the proper time. This promise has been carried out, though the objecting ones derisively protest, "with a string on it as big as a cable."

In short, there was formed the Boston Automobile Show Association, composed of the three holders of the lease, and which offered to the Boston Automobile Dealers' Association (of which two of the three were leading members) the lease on the terms of 50 per cent of the profits of the show, the other 50 per cent to be retained by the Boston Show Association.

At once there was a howl which threatened to disrupt the dealers' association. To placate some of the more prominent dealers several were "taken in"; others, on more or less indefinite promises of profit participation, were added, making eleven noses all told. These eleven promptly met, organized and, before the protesting wing awakened, had formed the Boston Automobile Dealers' Association, Incorporated, secured a charter and entered into a contract with the Boston Automobile Show Association for the holding of the show on the basis first proffered.

The deal would seem to be complete but for the fact that the National Association of Automobile Manufacturers has pledged itself not to exhibit in any show not sanctioned by it, and this sanction the protesting Boston dealers vow they will prevent, claiming that the national body never will issue a sanction when the true condition of affairs is laid before it. Both sides are counting on the support of their respective principals in the N. A. A. M. to obtain the necessary approval, and each figures that it simply cannot lose. Already the protesting dealers to the number of twenty-eight have formed a counter organization and applied for a State charter, and have addressed the following circular letter to the Boston dealers:

"Those of us who are alive to our own financial interests and who do not propose to submit to being deprived of the share of the profits of the Boston automobile show, which we have had for two years past, and who will accordingly vote for Plan 1 on the accompanying sheet, for holding the show, will associate ourselves and apply for a sanction for holding the 1905 show from the National Association of Automobile Manufacturers."

"We have every reason to believe that a sanction will be granted to those favoring a show held on the same basis as the two highly successful ones of 1903 and 1904, and not to those whose intention it is to get for themselves a majority of the show profits because of the holding of an option on a lease of a hall."

"The National Association of Manufacturers has already been notified that a sanction will be applied for by those who propose to run a show in which every dealer in Boston may participate on a fair basis."

The two plans referred to are outlined as follows:

"Plan 1 provides for a show to be run by a committee of three to be appointed by a majority vote of all the dealers in Boston. All the profits to be divided among all the dealers on a basis to be arrived at by mutual agreement."

"Plan 2 provides for a show to be run by a committee who are interested in a lease on a hall in which it is proposed to hold the show, who, with their associates, demand 50 per cent of the show profits, in addition to a pro rata share of the other half, for the use of their option on the lease of the hall."

"Plan 1 means all of the show profits for all the dealers. Plan 2 means most of the profits for a few of the dealers."

More than brochures containing summaries of catalogues, or anything else, the members of the Association of Licensed Automobile Manufacturers, as a body, are just now interested in considering plans for the regulation of relationships between themselves and agents. The report of a special committee appointed to deal with the agency question occupied most of the time of the members at the meeting held at Buffalo last month, and the various clauses of that report are still engaging attention and discussion, as was learned when two A. L. A. M. members were found at a New Jersey shore resort on Sunday with copies of the report in their hands talking it over.

It would seem that the New York Trade Association was by no means original when it hit upon the plan to preserve harmony by not adopting resolutions that would be compulsory and binding upon the members, but of simply adopting resolutions recommending certain methods for the sake of uniformity. The report of the special committee on the agency question that was made to the A. L. A. M. at the Buffalo meeting was, it now turns out, in the form of a series of suggestions which it was recommended should be adopted by the manufacturers severally. Most of these recommendations, after consideration and discussion, were voted upon as being approved, and it was understood that they will be generally adopted by the members, although the action was not of the sort that makes such adoption obligatory, as was the case with the agency contract clause adopted last year.

From one manufacturer who intends to adopt and adhere rigidly to all of the suggestions made, and who says that there is no doubt about the other members doing the same, it has been possible for the Motor World to learn what were some of the most interesting of the suggestions made and approved. These are given further on.

In fact, it has been learned from another source that what is perhaps the most interesting and important clause, and the shortest one in the recommendations, yet remains to be adopted, though it is of a character that makes it seem certain of general and absolute support. This is a clause suggested for embodiment in each agency contract to prevent that form of double dealing by agents which developed in several localities this year—that is, the handling of a line of licensed cars by an agent under his own name, and the operation by the same man of another store where, under another name, he deals in the products of a manufacturer not in the licensed association. In order that the manufacturers might effectually guard against such practices in the future, the following clause in the agency contract has been proposed:

"This contract expires by limitation on —; or may be cancelled by either party upon written notice, served by mail, or otherwise."

Such a clause in the contract would enable a manufacturer to decapitate summarily any agent convicted of violating either the spirit of the letter of the terms under which he is selling cars. There would be no necessity of any notice of thirty, sixty or ninety days to the wrongdoing agent, during which time he might play havoc with the interests of the manufacturer in the district where he is his representative. It would be as powerful for the protection of the agents also as for the manufacturers. They could demand the prompt punishment of any price cutter or raider upon their territory. This recommendation is one that will probably be adopted by the next A. L. A. M. meeting. It probably will not, however, be made a part of the obligatory contract clause adopted last year.

Among the recommendations made in the report of the committee at the Buffalo meeting, and approved, which, by-the-way, were reported exclusively in the Motor World immediately after the meeting, was one providing that agents, in the event of their appointing sub-agents, shall require them to execute a contract practically a duplicate of the one under which the original agent is operating, and that the original agent shall file with the manufacturer a list of his sub-agencies and copies of the contracts executed by them.

Another recommendation was that each manufacturer shall insert in his agency contract a provision for the payment of goods with cash on delivery. Still another point covered by the recommendations was that agents' contracts shall specifically stipulate that the manufacturer shall not sell any cars within the territory of an agent, and that the agent shall not sell any cars outside of his territory.

Yet another provision recommended and approved was that no agent or dealer who has not an established place of business for the sale of automobiles shall be allowed any discount during any fiscal year until he has ordered and paid for at the list price at least three cars listed at less than \$1,000 each, or at least two cars whose list price is more than \$1,000 and under \$2,000, or at least one car when the list price is more than \$2,000.

The intent of the last provision is to do away with "curbstone agents" and to prevent persons from getting a discount on cars for their own use by taking an agency. Under the operation of such a rule a new dealer or agent would pay full list price and not get any discount until he had purchased four of the cheapest class of cars, or three medium prices, or two of the highest priced. As has been stated, however, the adoption of the scale does not deprive the manufacturers of the right to exercise discretion.

Also under discussion has been the advisability of adopting a rule for both manufacturers and agents not to trade any cars for advertising, because of their being generally resold at a cut from the list price.

REORGANIZATION FOR FISK

Generous Proposition Submitted by Assignee and Readily Approved by Many Creditors.

Alfred N. Mayo, assignee of the Fisk Rubber Co., Chicopee Falls, Mass., has finally decided that reorganization of the company is the best way out of its difficulties. Under date of July 25, he submitted his plan to the creditors, and on their decision, of course, the result hangs.

In a communication accompanying his proposal, which he states has been approved by many of the largest creditors, Mr. Mayo reports that since taking possession of the property, on October 13 last, he has operated the factory "to its full capacity and found a ready market for the product at fair prices." From the date of his appointment to May 13, a period of six months, the profits earned aggregate \$62,750. If the plan of reorganization is accepted and consummated, the assignee expresses his willingness to "remain with the new company and hold such office at such reasonable compensation as the directors may request."

In detail the basis of reorganization as outlined is as follows:

1. A new corporation to be formed under the laws of the Commonwealth of Massachusetts, or of some other State if deemed more advisable, to be called "The Fisk Rubber Company," or some other suitable name; said corporation to have a capital stock of \$600,000, divided into \$300,000 6 per cent cumulative preferred stock, said stock being preferred both as to dividends and assets in case of liquidation, and \$300,000 common stock. Both common and preferred stock shall have equal voting power.

2. All of the assets in the hands of the assignee, Alfred N. Mayo, less a sum sufficient to pay all debts, expenses, and counsel fees incurred by him, shall be transferred to the new corporation in payment for all of its capital stock, excepting, however, that the assignee shall retain in his hands an amount of cash sufficient to pay all creditors of the company, as provided in Sections 3, 4 and 5, following.

3. All creditors having claims of less than \$100, as of the thirteenth day of October, 1903, are to be paid in full cash.

4. All creditors having claims to the amount of \$100 or more, as of said date, are to be paid 5 per cent in cash and 100 per cent in the preferred stock of the new corporation at par.

5. Fractional parts of \$100 are to be paid in cash. All debts are to be reckoned as of October 13, 1903, and without any interest.

6. The creditors are to accept payments as above set forth in full discharge of all their claims against the company, or Alfred N. Mayo, individually or as assignee.

7. Stockholders of the old corporation, the Fisk Rubber Company, are to receive in exchange for their shares in the old corpora-

tion 100 per cent par value in the preferred stock and 100 per cent par value of the common stock of the new corporation.

8. The balance of the stock of the new corporation is to become the property of said Alfred N. Mayo, and is to be received by him in full payment for all his services as assignee of the old corporation.

9. Dividends, if earned, are to be paid on the preferred stock semi-annually at the rate of 6 per cent per annum. No dividend shall be paid on the common stock while any of the preferred stock remains outstanding unless assented to in writing by a majority of the preferred stock outstanding at the time.

10. Fifty thousand dollars, par value, of the preferred stock is to be retired at par annually before the 31st day of December in each year, beginning with the year of 1905. The shares to be retired shall be pro-rated amongst the several holders of preferred stock, according to their respective holdings, except that any owner of preferred stock may elect that his pro rata amount shall not be retired, in which event the shares to be retired shall be pro-rated amongst the remaining holders of the preferred stock, in proportion to their respective holdings. If the earnings of the new corporation in any year are not sufficient to retire so large an amount of the preferred stock, so much of it shall be retired as the earnings will justify, in the opinion of the majority of the board of directors of the new corporation.

11. The whole or any part of the preferred stock may be retired at any time at par and 6 per cent interest from the time of the dividend last preceding, provided that thirty days' notice thereof shall be given to each owner of the preferred stock; said notice shall be in writing and mailed to the last known place of residence of each holder of the preferred stock, as shown by the books of the corporation, and immediately upon the expiration of said thirty days the stock described in said notice shall be considered as retired.

12. The above plan of reorganization is to be carried into effect, and the indebtedness of the old corporation settled as hereinbefore provided, on or before November 1st, 1904.

Export Gain is Smaller.

A smaller gain than usual is shown by the export returns for June. The value of automobiles and parts shipped abroad was \$181,798, as compared with \$168,273 for the same month of 1903. The month completes the government's fiscal year, and the values for the twelve months ending June 30 have reached the figures of \$1,895,605. This is nearly \$700,000 over the previous year, the figures for the latter being \$1,207,065.

Foss Succeeds Eldridge at Boston.

W. E. Eldridge, manager of the Pope Mfg. Co.'s Boston branch, has tendered his resignation, to take effect September 1. He will be succeeded by W. K. Foss, manager of the Pope depot in Providence.

LACKAWANNA IN LITIGATION.

Officers Desire to Dissolve Buffalo Concern—Creditors Want it Declared Bankrupt.

Stockholders and creditors of the Lackawanna Motor Co., of Buffalo, N. Y., are at loggerheads, and the affairs of that concern are in the courts for adjudication as a consequence.

The proceedings began on July 25, when the officers of the company began voluntary dissolution proceedings. Justice Kenefick, of the State court, appointed William C. Carroll temporary receiver, and John T. Ryan was named as referee to hear arguments for and against dissolution. It was stated in court that the company has debts amounting to \$10,000 and nominal assets of \$15,000 value.

A new development arose on July 29, when a petition was filed in the United States District Court by creditors who wanted to have the company declared involuntarily bankrupt. The petitioning creditors and their claims are: James J. Lawlor, \$307.68, for merchandise; Chestnut & Slaght, \$61.06, for merchandise, and the Lobee Pump & Machinery Co., \$160.25, for merchandise. All are of Buffalo.

The capitalization of the Lackawanna company is \$25,000, and the directors are Frank J. Conrad, Harry D. Baird, both of Buffalo, and C. Harry Conrad, of Nicholson, Pa.

Day Entertains A. L. A. M. Committeemen.

Several members of the executive committee of the Association of Licensed Automobile Manufacturers were entertained by General Manager George H. Day last Friday and Saturday at his summer place, Fenwick, Saybrook Point, Conn. The guests included Charles Clifton, M. J. Budlong, S. T. Davis, Jr., E. H. Cutler and F. L. Smith.

Pulley Company Enters Auto. Field

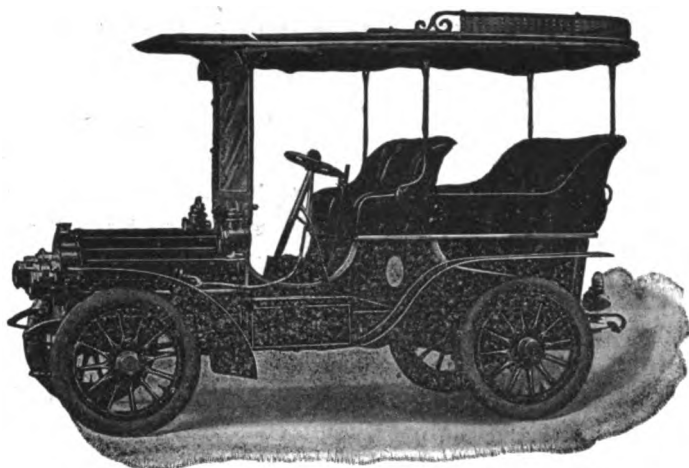
The Reeves Pulley Co., of Columbus, Ind., has decided to manufacture automobiles, and the work will be entered upon at once. The vehicle to be turned out will be a 14 horsepower touring car for four passengers. Only six cars will be made this year, but next year the plant will be enlarged and the manufacture of the machines will be extended.

London Office for Bullock-Beresford.

The Bullock & Beresford Mfg. Co., Cleveland, Ohio, have established an office at Saracen Chambers, Snow Hill, London, to better care for their increasing foreign trade; it also means that an even more determined effort will be made to exploit the Bullock igniter in foreign fields.

International Gets Stodder Tire.

The International A. & V. Tire Co., Milltown, N. J., has taken over the sole rights of the Stodder puncture proof tire, and will hereafter make and market it; the tire will be made in both single tube or clincher forms and in all sizes.



The 1904 Haynes

1904
Tonneau

TWO MODELS

1904 Light
Touring Car

Tonneau, \$2,550, with top and front glass, two Solar No 1 gas headlights two Dietz Regal oil lights, tail light, horn with tube, and full equipment. \$2,450 without top and front glass.

Light Touring Car, \$1,450, having much the same outward appearance as our famous Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

We originated the use of aluminum castings in gas engine construction and, making our own composition and castings, have brought them nearest perfection. Our invention is universally imitated, but never equaled. See the catalogue.

THE HAYNES-APPERSON COMPANY, Kokomo, Indiana, U. S. A.

THE OLDEST BUILDERS OF MOTOR CARS IN AMERICA

Members of the Association of Licensed Automobile Manufacturers

Branch Store: Chicago, 1430 Michigan Ave.,
See Our Exhibit at St. Louis Fair

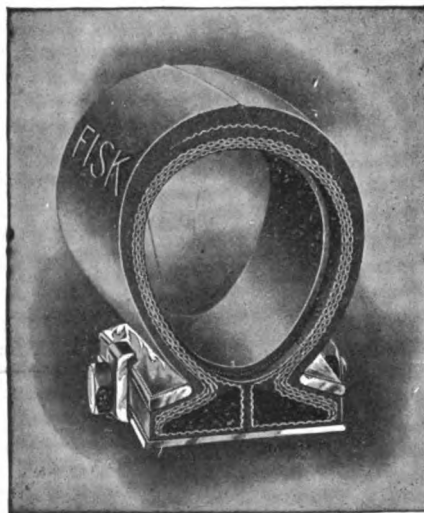
REPRESENTATIVES:

New York, BROOKLYN AUTOMOBILE CO., 66 W. 43d St.
Los Angeles, J. A. ROSESTEEL, 649 Broadway
Toledo, TOLEDO MOTOR CAR CO.

Brooklyn, BROOKLYN AUTOMOBILE CO., 1239-41-43 Fulton St.
Buffalo, BUFFALO AUTO EXCHANGE, 401 Franklin St.
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Philadelphia, EDWIN T. ROSE, 362 N. Broad St.

WHY DO AGENTS WANT Fisk Detachable Tires?

Can be easily and quickly
repaired on the road.
Air chamber entirely above
the rim.
Impossible to pinch the inner
tube.



Because they are easily sold.
Have a clean record.
Give more mileage.
Give less trouble.
Have satisfied Customers.

GET POSTED ON TIRES.

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BUFFALO,
DETROIT,
CHICAGO,
SAN FRANCISCO,

PHILADELPHIA,
WASHINGTON,
TORONTO,
ST. LOUIS,
LONDON.

OMAHA,
MINNEAPOLIS,
DENVER,
LOS ANGELES,

FISK RUBBER COMPANY,
CHICOPEE FALLS, MASS.



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 Address us at P. O. Box 649.

CABLE ADDRESS, "MOTORWORLD," NEW YORK

Entered as second-class matter at the New York, N. Y., Post Office, November, 1900.

NEW YORK, AUGUST 4, 1904.

Trend in Cylinder Construction.

There was a time when even the most farsighted engineers and designers were inclined to regard multiple cylinder engines as considerable of an experiment. This was even after they had come into extensive use and their manifest advantages over engines of the single cylinder type had been made convincingly clear.

They based this dublety on the multiplication of parts and the consequent complication. "There are enough pistons, valves, etc., in a single cylinder engine to get out of order and give trouble," said one designer whose experience went back to the very beginning of the automobile, "without doubling or quadrupling the number. Generally satisfactory as the multiple engines are, I can never quite rid my mind of the question whether they are really superior to a single cylinder that has had the same amount of care and attention bestowed upon it."

Doubts of this sort, which were pretty general a year or two ago, have now been almost entirely removed. Complication or no complication, the multiple cylinder engine has given unmistakable evidence of its all around superiority. The field of the single cylinder engine is now confined to small cars of the runabout class, and it is by no means certain that even in this field it will continue to reign undisputed. But whether it does or not, the time is coming, has almost come, in fact, when all cars ranked as touring cars and designed to regularly carry more than two passengers will be driven by engines of two or more cylinders.

The reasons for this are twofold. First, mechanically the multiple cylinder is a long step in advance, producing more power for a given cylinder area and applying it more regularly and economically than its rival. Second, a widespread belief in this superiority has been engendered, with the result that it has become most emphatically the fashion and is everywhere demanded. So much is this the case that in certain sections—notably in the larger cities—the presence of a single, and sometimes even a double, cylinder engine imposed a handicap on sales that it was almost impossible to overcome. An extreme instance of this came to light not long ago, when one dealer admitted to us that he found it impossible to hold his old customers, all of whom wanted multiple cylinder engines. Were it not for the trade of new people, who were not so well posted, his season would have been a most disastrous one.

There are still advocates of the single cylinder, both here and abroad. But, as already stated, they have practically given up the fight, as far as the big cars are concerned, and confine their efforts to the small ones, where considerations of economy of original and maintenance cost naturally have great weight.

Policy and Garage Charges.

There continues to be complaint of the charge for the cars of transients made by garages, especially such of them as are compelled to look to this class of trade for a large and lucrative proportion of their business. In some of these establishments tourists are looked upon as fair game, and charges of all kinds are magnified accordingly. In this way motorists are angered and a great deal of future trade is effectually spoiled.

In this connection it is worth while noting that in Great Britain the uniform charge made at garages mentioned in the hand-

book of the Automobile Club of Great Britain is one shilling (50 cents) per night. Some garage proprietors even go the length of making no charge, depending for profit, of course, on the sale of supplies, sundries, etc. It is claimed that this class is farsighted, inasmuch as they earn the goodwill of their patrons and reap more profit than would be the case if they made a regular charge.

Such generosity would scarcely pay in this country, but it is the poorest kind of policy to so "whoop up" prices as to excite resentment. The pleased patron is worth a lot of money, both directly and indirectly, and every effort should be made to earn the goodwill of transient as well as regular customers.

Solving the Agency Question.

With a brevity that, in this case, is the soul of sense, the Association of Licensed Automobile Manufacturers have hit upon a solution to the problem of troublesome and "crooked" agents. Reference is made to the clause recommended for the adoption of manufacturers in their agency contracts at the Buffalo meeting of the A. L. A. M., which is treated of in the news columns this week.

"This contract may be cancelled by either party upon written notice."

There is no nonsense about this sort of an agreement. It is an epitome of business sense. It means no dilly-dallying with delinquents. "If thy right hand offend thee, cut it off," is not to be followed literally except by ascetics, but figuratively it is good commercial doctrine. In mercantile life no man, not even a "right hand," is so necessary that one can afford to indulge him in wrongdoing. A contract making possible a radical cure for abuses of agency representation, whether within the ranks of any association or outside of them, is the only sensible sort. It shows that the parties to it mean business. There has been too much nonsense fraught with woe about "giving notice" to men who were violating the spirit and letter of agency agreements. In a few months, or even thirty days, an agent who has "received notice" can complete negotiations that he may have made and can work incalculable injury to the business of the maker. Giving him notice is to make him for a period a licensed freebooter. What does he care for the reputation of the manufacturer, or his goods, or for his prices, after receiving notice?

This sort of a clause represents the conditions under which agencies are handled in

several lines of substantial commerce. It will be interesting to some of the present manufacturers of motor cars also as an old friend, for it is one of the conditions that in other days was found most effective for dealing with bicycle agents. Its great charm is that it is as potent for protection at one end of the line as at the other. The manufacturer is not obliged to continue an agency one minute after it becomes obnoxious, and a dealer need not continue to suffer from the tricks of a neighboring agent if the manufacturer does not correct the troublesome one. The existence of such a clause in a contract is a wonderful corrective. It is very seldom that an agent wants to terminate a contract, and, while the handle of this sort of an agreement may seem to be toward the manufacturer, it is really the best protective fence that the agent could want. As indicative of this fact, it is noteworthy that in the days when some of the present automobile manufacturers were bicycle makers one of them proposed, as a favor to agents, to dispense with the "cancel immediately" clause of the agency contract, and was met with a howl of protest from the agents themselves, who wanted the clause retained.

A manufacturer and his agents should be conceived of as a family, of which the producer and dispenser is the head. The welfare of his family of agents and their thorough protection should be a consideration of first importance with the manufacturer. They should be safeguarded from their own folly as well as from the misconduct of others. A spy system is not an admirable institution even in warfare, and is not to be recommended for adoption. Yet in all mercantile competition there is virtually a spying by the dealers. It is established and will not down. One trouble has been that the dealer who has discovered a competitor indulging in ways that are dark and tricks not in vain has been at a loss for protection except by indulging in the same practices. The automobile as an article of commerce is peculiar in that it may be run over the road for any distance from the district of one agent to that of another, in the guise of a car that has been in commission and sold in the illegal territory at a cut rate. It is almost impossible, however, to prove deals of the sort, even when one is morally certain of them. For all such follies and abuses there must be vested in the head of the family an absolute authority to cut off and cast out the offender without warning, without proof; in short, without assigning any reason. With this power and the free-

dom to use it at any time shared mutually by the manufacturer and the agent, the dealer who can satisfy himself and his principal of another's wrongdoing can demand "Cut him off or I will quit." It is a condition that is wholly for the benefit of the fair dealing, and only those of roguish bent have any excuse to shy at it.

With the complex relations existing in the automobile household, caused by intermarriages, or the membership of some agents in two or more families, the need for a uniformity of regulations is all the more apparent. The idea, therefore, of manufacturers doing away with their individually varying forms of contract, some requiring more and some less time for notice to quit, is one that looks toward more perfect discipline and harmony, better protection and more security of feeling all around. In nature, the acts that bring their punishment instantly, as a concomitant of violation, are the ones most generally and absolutely avoided. The red hot iron is respected because it does not wait awhile to inflict its punishment for trespass. It works upon the motto of, "Do it now."

For the Well-Being of All.

The diplomatic notice to its associate members, conveyed by the N. A. A. M. through President Post of the Motor and Accessory Manufacturers, that their resignations will be thankfully received, and President Post's invitation to them to come inside the M. and A. M. fold, are dictated by the first laws of logic. Both the notice and the invitation should be generally and cheerfully acceded to.

It has long been plain that associate membership in the N. A. A. M. was at most a mere courtesy and of no real benefit to those most concerned, and rather, if anything, an embarrassment to the association itself, since its doors and its councils were of necessity closed to the parts and accessory men. It is manifest that the relation of bodies of buyers and sellers are such as do not permit of free and easy discussion. They run rather in different, if somewhat parallel, currents.

The organization of the Motor and Accessory Manufacturers was the only logical outgrowth of such conditions, and the makers concerned can be and will be best benefited by that organization. The fact is so plain that it scarce deserves remark. President Post expresses it very tritely in his communication to the parts and accessory people—it is an exchange of "voiceless member-

ship for membership in an aggressive organization whose interests are your interests, and in the direction of whose affairs you may take an active interest." It should be enough to induce all fullblooded men to quickly accept the invitation extended.

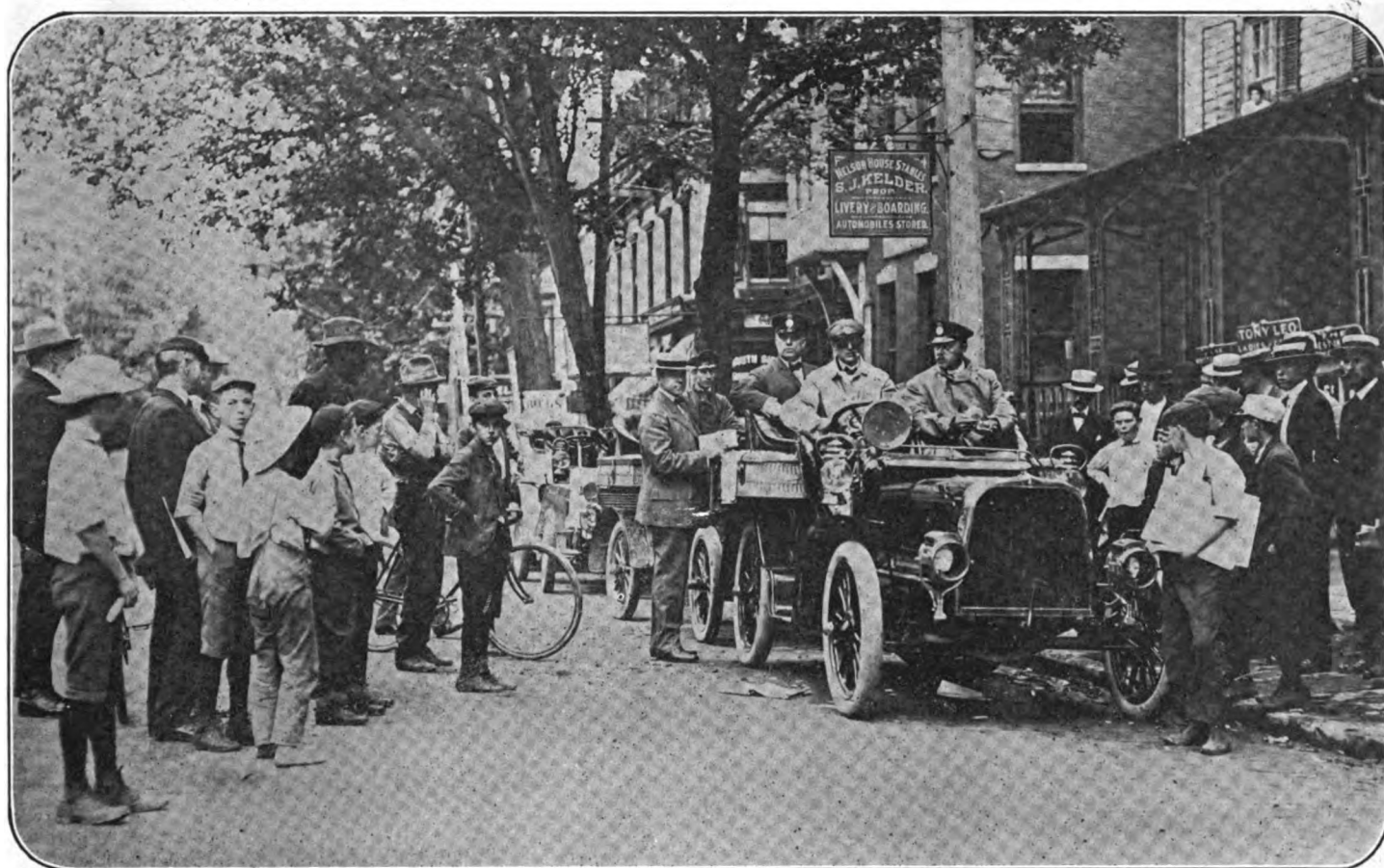
On the other hand, the resignation or retirement of its associate membership will enable the National Association of Automobile Manufacturers to be what its name implies and what, in fact, to all intents and purposes it is and has been, and what its officers desire it to be—an association of automobile manufacturers pure and simple.

Purists take exception to the term "tonneau with side entrance." When the tonneau was first introduced and obtained its wonderful popularity it was distinguished from the surrey by its rear entrance; it was the latter that made it a tonneau. Eradicate the rear entrance and it is not easy to see where its claim to being a tonneau lies. The tonneau's other peculiarity was that it had seats running lengthwise of the car, as well as seats at the back; and the designing of side entrances does away with the side seats in great measure and leaves the new arrangement so much like a surrey that it is not easy to point out the line of demarcation. Yet it is dollars to doughnuts that the term "side-entrance tonneau" will stick and continue to be used long after the rear entrance tonneau has disappeared—if that event is, as is prophesied in some quarters, to come to pass.

The height of absurdity is, perhaps, reached by the council of Valparaiso, Ind. Under an ordinance just passed, a horn must be blown at every street crossing. A wise man once remarked that the way to secure the repeal of a bad law was to enforce it; and Valparaiso motorists will do well to live up to the law and toot their horns at every street crossing. The law does not say how many toots are required, so it would be well to be lavish of toots so as to be on the safe side. We do not know how many motorists there are in Valparaiso, but we feel sure that a course of such treatment would bring the councilmen to their senses.

At the present rate of progression there will be mighty few cars sans bonnets in 1905. Not all of them will cover engines, but an increasing number will simulate the real thing so closely that only experts will be able to distinguish the "blind" bonnet from the genuine one.

Scorching Mars St. Louis Tour.



STARTING FROM POUGHKEEPSIE; A. L. POPE AND ARTHUR POPE IN POPE-TOLEDO.

Going now over good roads and then over bad, the tour to St. Louis under the auspices of the American Automobile Association is progressing quite satisfactorily toward its goal without there having been thus far any particularly noteworthy incident or serious accident. In the Motor World of last week the account of the tour was given up to Wednesday night, when the tourists had arrived at Utica, after a day of travel, from Albany, over disgraceful and dangerous roads, which led to their sending a resolution of formal protest to Governor Odell of New York. The story is now taken up and given day by day in the telegrams of the Motor World's special correspondent.

While the officials of the run have made every endeavor to have the trip maintain the character of a pleasure tour, and to prevent scorching, it is evident from the time made between cities, from the early starts made in the efforts to be the first to arrive, and from various details, that there is considerable fast driving. It is plain, also, that a few have been scorching from the very start, although the correspondents, in friendliness to the committee, are trying to conceal the fact, or at least to minimize the extent of the speeding.

UTICA TO SYRACUSE.

Syracuse, July 28.—This was the easiest day of the trip thus far, and the forty-nine mile run from Utica to Syracuse should have been made by any one in three hours or even less. One car did come over in three hours. The other cars remained until late, and were caught in two thunder showers and the drivers were drenched. The roads, naturally good, became very slippery, owing to their clayey nature, and many of the drivers had difficulty in holding the road. Side slipping was experienced by all, and especially by the big cars, one of which went through a hedge fence, after diving over a ditch. This was Mr. Burchard, driving the Haynes-Apperson car. Mud of a consistency of axle grease, and composed of treacherous red clay, gave the wheels no traction, and the big cars came to a standstill on the hills and then slid backwards.

All of the twenty-three cars which reached Utica last night came through to Syracuse to-day following a well laid trail of confetti. The route as per the card was given up, and an entirely different road was selected. Much of the road was ideal, and fast time was possible. There are indications that the rain will cease, and to-morrow's run of ninety-four miles to Rochester, taking a road twelve miles longer to avoid the Montezuma Swamp, is not dreaded.

Four tourists will join the party here, including H. W. Smith, a member of the tours committee, and his wife, and three others.

Upon their arrival in Syracuse the tourists found an enthusiastic crowd at the Yates House to meet them, and members of the Syracuse Automobile Club extended an invitation to attend a dinner at 6 o'clock, given under the auspices of the Syracuse Automobile Club. At night there was a theatre party at the Valley Theatre, an out-of-doors affair.

The 70-horsepower special touring car made for Harlan W. Whipple by the Scott Iron Works, has had a strenuous trip thus far. It reached Utica at 5 a. m. to-day, after having skidded into a ditch, where it remained until rescued early in the morning. Starting from Utica it made a three-hour trip to Syracuse, and is now in excellent working order.

SYRACUSE TO ROCHESTER.

Rochester, July 29.—Roads of every description made up the fifth day's trip, but the tourists did not falter, and they reached Rochester to-night without passing through the dreaded Montezuma Swamp. H. Smith found a road with a hill a mile long and some 45 per cent grade, by way of Elbridge, Woodspoint, Port Bryon, Spring Lake, South Butler, Savannah, Clyde, Lyons, Newark,



NEAR STAATSBURG, N. Y., ON TUESDAY; WILLIAM HURLBURT AT WHEEL OF CADILLAC.

Palmyra and Fairport, into Rochester. Along this route, after the hard rain of last night, the roads were found in execrable shape. The ruts were deep and hard, and the cars rocked and swayed fearfully. At the bottoms of the hills the surface had not dried, and some treacherous spots were discovered. Thank-ye-mums were plentiful, and many a car was given a test that was very severe. The participants in the run, twenty-three cars in all, with about seventy people, who finished at Syracuse, came through to Rochester, however, without untoward incident. The people along the line were found well posted and so hospitable that the drivers stopped again and again to enjoy their hospitality and to make acquaintances. At South Butler the children of the city were taken in hand by Charles J. Glidden, who loaded them into his big Napier car and carried them away for a long trip. Mrs. Glidden rested and visited while her husband made friends of the entire town by his courtesy. Automobilists who came through South Butler later on were showered with bouquets of flowers and tendered invitations to stop. Pretty young women were among the welcomers, and many tourists tarried for awhile. At Lyons, the noon stop, Mr. Glidden found an excellent little restaurant on a side street, and had such an excellent meal that he stood out in the street and "barked" for that restaurant until he built up quite a business. At Macedon, Wayne County, Mrs. F. Murray gave a lawn party in honor of the tour, and had a dozen and a half pretty young ladies present to entertain the visi-

tors, many of whom she stopped en route. Mr. Sennenstein took a number of them driving in his White steamer, and Dwight Huss came along and took more of them in the Olds tonneau, where one of them occupied a seat on the typewriter, which travels strapped to the rear seat of the machine. Later a party sat down to play cards under the trees, and others who came along, including J. M. Waters in his Panhard, stopped to partake of cake and sandwiches which were ready. At Rochester the tourists talked of little else than the pleasures of touring without scorching, and many considered this sort of touring just about right with the roads in such vile condition. There was noticeable a cessation of bragging regarding time, and the evening was spent relating the pleasures of the day.

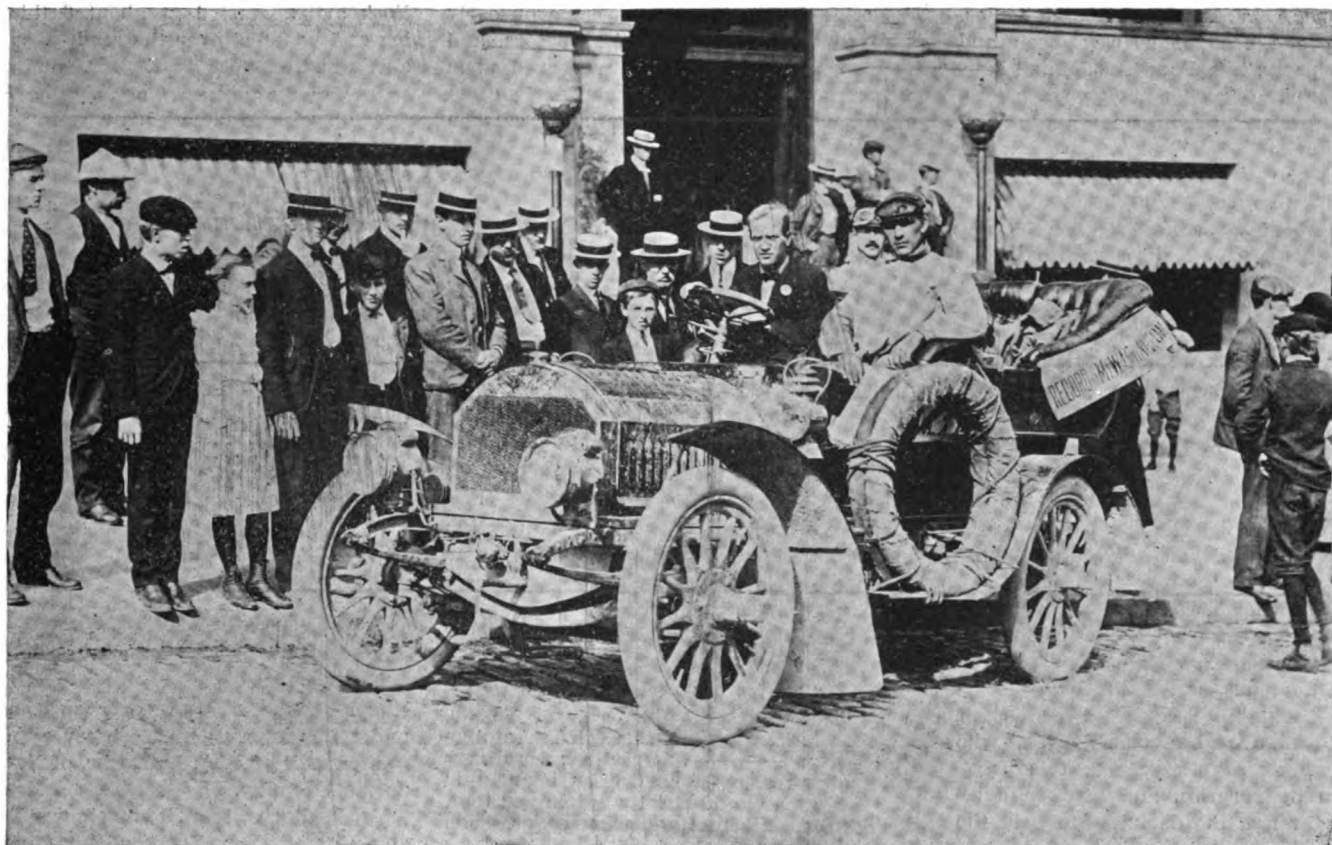
ROCHESTER TO BUFFALO.

Buffalo, July 30.—After their easy run of Friday into Rochester the tourists became imbued with the scorching fever, and to-day they tore over the ideal roads from Rochester to Buffalo, seventy-three miles, at a shameful gait. The inhabitants stood aghast at the wayside, waving adieus to the flying tourists. Human nature could not withstand the temptation, and every one travelled fast. Thank-ye-mums were lacking, there were few if any ruts, and the road wound through a pretty country not very thickly inhabited.

A score or more of autoists from Buffalo and the surrounding country came down the road to meet the tourists, and there were

lively times, for the reception committees scorched themselves. Policemen winked at the violations of the law, they having had a strong tip. All of the bad going of the past was completely forgotten in the good going of the last day of the week, and at the Iroquois Hotel to-night little was talked of other than the fine trip from Rochester. J. M. Waters made a run he will not soon forget, for in his 40-horsepower Panhard he "opened it up" on one unpopulous stretch of roadway and covered several miles at the rate of forty-eight miles to the hour without a jar or a jolt of any kind. The dust flew upwards for one hundred feet, and for two miles it was a dense cloud. Harlan W. Whipple "opened up" too on the stretches of road where no harm could be done. On the big machines the exhaust left in one steady roar, and they ran seemingly as smoothly as on Ormond Beach. The big special Peerless car was given some fast trials, and not found wanting. As this was the first long stretch of really fine roadway found on the trip, the showing of the big car was featured in to-night's talk around the hotel. A. L. and A. W. Pope, in the Pope Toledo, let out their car and had a hard brush with several White cars. Finally the Pope car landed a yelping dog, which ran right under the radiator. He was rolled over and over and came out alive. The Olds tonneau, bowling along at twenty miles an hour, ran over a chicken, and that chicken went out from under the car minus most of its feathers.

The route to-day was through North Chili, Bergen, Byron, Batavia, Crittenden, Bow-



PERCY PIERCE, IN PIERCE GREAT ARROW REACHING ALBANY ON TUESDAY AFTERNOON.

manville, into Buffalo. The hills on this route are few, and the road is practically straight. At only one point, and that just outside of Batavia, is there a chance to get lost. There are two forks there, either one running to Buffalo, but the right fork should be followed to secure the best going. R. H. Johnston wired to-night that he had arranged to join the trip in a Peerless car at Cleveland, and additional entries are being received by wire and mail from all points west.

Those who go through to St. Louis, and who may fail to register any night through an accident or otherwise before the time, 10:20, will be given second-class certificates. This has been decided upon by the A. A. A. tours committee.

Mrs. Harlan W. Whipple has decided to return from here, but doing so is grievous to her, for she says that the trip has been so thoroughly enjoyable that she would like to remain. Before starting, Mrs. Whipple promised her children a trip to the seashore, and she returns to give them this trip.

To-morrow (Sunday) will be spent at rest here.

BUFFALO TO ERIE.

Erie, Pa., Aug. 1.—This was a day of scorching in the tour. Good roads and promised rain, which seemed about to come down all the way through the ninety-four-mile journey, caused all of the drivers to put on top speed. Fast time was made, too, for the road was equal to almost anything in the way of speed. James L. Breese, in his 40-

horsepower Mercedes, made the ninety-four-mile trip in 3 hours and 15 minutes. James M. Waters, in the Panhard, found the roads to his liking, and, starting at daylight, finished the run first, doing it in 3 hours and 50 minutes. The Olds tonneau, driven by Dwight Huss, did it in 4 hours and 27 minutes. C. W. Burchard, in the Haynes-Apperson light touring car, travelled the distance in 3 hours and 45 minutes, starting just after Mr. Waters. The Pope-Toledo came along leisurely in 4 hours and 22 minutes. Charles J. Glidden started late and was caught in the train. Mr. Breese and Mr. Whipple stopped at Eighteen Mile Creek to enjoy the hospitality of Percy Pierce, at the Pierce camp on Lake Michigan. They spent some time in the water and came on after dinner. Frederick Lesh and his party also stopped for the morning.

All the twenty-four starters who left Buffalo arrived here, and several will be added to the party here, including Tom Fetch, the transcontinental tourist, who will drive his old love, the Packard, on the journey.

The results of to-day's run were an unusual number of chickens, turkeys, ducks and one dog slain, which President Whipple struck. Mr. Waters in the early morning hours potted seven turkeys, besides some chickens and geese. Chairman Augustus Post said that it was impossible to keep out of the way of the feathered creatures. They flew right under the wheels.

An effort is being made to-night to stop the fast travelling, and to set a starting time for each morning. To-day's fast running was

condoned by the probable rain, which finally did come down, and which would have drenched the participants in the run had they delayed.

ERIE TO CLEVELAND.

Cleveland, Ohio, Aug. 2.—Endurance run figures will be passed when the St. Louis touring party leaves this city to-morrow morning. Twenty-five cars arrived to-day from Erie, 110 miles, in fast time. Two cars came from Pittsburg and seven joined here. One of these coming from Erie returns. This leaves thirty-three as the net figure. The returning tourist is George T. Thompson, with his wife and family, and Mr. Grieve. They started in at Rochester unannounced, and followed the confetti trail to Erie before making an entry. The Pennsylvania tourists who came over rough roads were Mr. and Mrs. W. C. Temple, with Lester Wilson, the former cyclist, as chauffeur, in a Pierce Great Arrow, the second of this car on the trip; Mr. and Mrs. E. H. Wallace, in a 7-horsepower Rambler runabout, from Freeport, Pa. Mr. Temple is president of the Pittsburg Automobile Club. The Cleveland party includes R. H. Johnston, of New York, in a Peerless with a driver; T. C. Collins and a party of four in a Peerless; George S. Waite, wife and a party of two in a White, and Dr. Gifford and party in a White, making seven in all of the White steamers now on the run; Fred Gates, wife and party in a Winton; Jack Blakeslee, wife and party in a Winton, and H. P. Dyer and a party of four in a Winton 4-cylinder car.

A. L. Pope, A. W. Pope and George Soules, in the Pope Toledo; Frederick Lesh and wife, with party, in a Pope-Toledo, and Harold Pope and friend in a Pope-Hartford, reached Cleveland at 11:30 this morning and continued on to Toledo to arrange for a big celebration at the "Farms" there to-morrow night. The two days' trip in one carried these cars about 240 miles over the country. On Thursday the two days' run from Toledo to South Bend will be made in a single day owing to the lack of accommodations at the smaller cities enroute for the 125 people in line. Detroit and Toledo will add more tourists at Toledo, so that 150 people will have to be cared for.

In their anxiety to reach Cleveland first representatives of two manufacturers started at midnight and caused a change in the rules for registering. The committee will now require registration at 7 o'clock in the morning, and this will hold the early birds. Mr. MacLellan left a call last night at the Reed House, Erie, for 2 o'clock. He drives a Royal. The White bunch of five cars were hastily made ready when this was discovered, and at midnight away went the flock of Whites into the night. Tom Fetch, who drove the Packard pilot car to this point, was taken by surprise, and made a daredevil run through the darkness to gain the lead. The Whites came right along, and just reached the Hollenden in time to beat out the Royal, which came round the corner 30 seconds after.

Messrs. Whipple, Glidden and Breese started long after the early birds, and came along during the heat of the day. James M. Waters, of New York, tries, as a rule, to land his Panhard first, but he knew nothing of the coup of the Royal and White cars until he started at 5:30 this morning, so he could not duplicate his yesterday's performance.

The Olds tonneau came through again to-day at an average speed of twenty-one miles to the hour. The Olds has travelled the 204 miles from Buffalo in 9 hours 42 minutes running time. George W. Hurlbut, in the Cadillac, was making a wonderful record to-day, when he turned around in some rough going entering Cleveland. This delayed him. To-day's roads were ideal generally, a light rain falling.

The White Sewing Machine Company entertained the visitors at a dinner at the Hollenden Hotel to-night, and a general good time was had.

CLEVELAND TO TOLEDO.

Toledo, Ohio, Aug. 3.—Thirty-four cars left Cleveland this morning, making the 130-mile run successfully over roads quite as bad as any encountered in New York State, and which are a disgrace to the State of Ohio. Hard clay surfaces packed in deep ruts "slewed" the cars around, and loose dirt roads caused all sorts of hard work behind the wheel.

Three cars arrived here yesterday—those of A. L. and A. W. Pope, Harold Pope and

Frederick Lesh. The Popes came on early to prepare a surprise for the visitors, and they succeeded, for each was served upon arrival with a subpoena to appear in court and defend a suit for killing a dog, a chicken or a turkey, as the case might be. J. M. Waters was told that the sheriff had come for him for the sandwich and coffee for which he refused to pay \$1 at Geneva yesterday, finally driving away without paying anything. Mr. Waters was very much perturbed. F. Ed. Spooner and D. B. Huss had really killed a black dog, and the guess of the policeman was so very good that both turned pale and asked for time to wash up before going to jail. Mr. Warner vigorously protested his innocence, claiming that the dog he killed was of quite another color, much to the amusement of the officer.

The subpoena was in reality an invitation to a dinner tendered by the Pope Motor Car Co. to the 125 tourists and about twoscore others at "The Farm" to-night. This dinner was by far the most pretentious function of the trip.

The subpoena follows: "The United States of America, State of Ohio, City of Toledo, against the President of the Toledo Automobile Club to ———. Greeting: for divers and sundry reasons appearing sufficient unto us, we command and strictly enjoin you that, laying aside all matters whatsoever, such as bum spark plugs, flat tires, bad roads or short circuits, notwithstanding any excuse whatsoever, you be and personally appear at Hanner's Farm, in the said City of Toledo, in said State of Ohio, on Wednesday, August 3, in the year of our Lord, A. D. 1904, at 6 o'clock p. m., then and there to witness whatever we shall elect to do unto you, the same being a respite from police, road and roadside trials and tribulations, in the way of a dinner, given under the auspices of Ye Toledo Auto Club, by Ye Pope Motor Car Company. And this banquet you may nowise omit, under penalty of having your rear tires slit, your gasoline watered, your batteries shortcircuited, and what more we shall elect to do to you will be aplenty.

"E. J. MARSHALL,

"President Toledo Auto Club.

"Witness: C. P. WAGER, Secy."

To-morrow the party journeys 160 miles to South Bend, avoiding Waterloo, Kendallville and Bryan, owing to lack of accommodations. Blue prints showing the entire course have been given each driver in order that he may waste no time by going astray, as did several to-day, in spite of a nicely laid trail.

Friday will be a day of rest in South Bend, for on Saturday the tourists will be joined there by the Chicago escorting party.

There were really no remarkable incidents of the run of to-day. The tourists became sensible with a long run before them, started at a sane hour, stopped for dinner on the way, and arrived here close together late this afternoon. In the party were the seven who joined the main line at Cleveland, with seven ladies in their party, bringing the total number of fair ones now on the trip up to twelve—a goodly showing for so arduous a journey. All of the ladies profess to be having a good time. J. M. Waters, the New

York artist, started at about 6 this morning and pounded over the roads at a steady clip, arriving here first. Mr. Waters said he would do this no more, for he finds it difficult work to plough his way through the roads, making a track for the others to follow.

E. H. Wallace and wife, in a Rambler, turned turtle twenty miles east of here to-day. After doing a fast run down a hill, they struck a soft place and spilled. Both were thrown about twenty yards, but escaped without injury to themselves or to their car.

Harlan W. Whipple and James L. Breese both had tire troubles to-day, delaying them until very late. Mrs. Whipple still continues with the trip.

B. Clifford Swinchart again joins here with his Yale car, which he had repaired after the break near Albany, caused by the carelessness of a chauffeur.

La Roche Reaches St. Louis Without Stop.

The first long-distance, cross-country, non-stop-of-the-motor run ever accomplished under the supervision of observers was put to the credit of F. A. La Roche, of New York, on last Monday.

Mr. La Roche, in a 20 horsepower Darracq, started from New York on July 25 to make the run to St. Louis without stopping his engine. He hoped to get to the fair in three or four days, but had not bargained for the rough roads that he encountered nor for the rainy weather. A. La Blanc started with him to alternate in driving the car, while H. H. Everett and Norris Mason went along to take turns as observers.

The official time of Mr. La Roche's start from New York was 9:44 a. m. Travelling day and night, he arrived at St. Louis at 12:13 o'clock on last Monday morning, August 1. His total time was 158 hours and 20 minutes. He decided then to keep his motor running while resting at St. Louis and undertake to make a non-stop record for the round trip.

Exactly what happened after he arrived at St. Louis is not known, the only information obtained being in the telegrams he sent to his garage, at No. 145 West Thirty-eighth street, New York. These were as follows:

"St. Louis, Aug. 1.—Arrived at St. Louis 12:13 this morning; all well; establishing new non-stop record for 1,600 miles, 158 hours' consecutive running of motor."

"St. Louis, Aug. 2.—Motor still running. Banquet to-night. Leave Wednesday noon, national highway."

"St. Louis, Aug. 2.—Leave St. Louis 4 o'clock to-morrow (Wednesday) morning, national highway. Arrive Sunday."

This is Mr. La Roche's second successful run of more than a thousand miles without stopping the engine in the same Darracq touring car. The other run was made between New York and Boston several weeks ago. If he reaches New York on his return from St. Louis without having his motor stop he will have broken all records for such performances, both here and abroad.

REPORT OF SERVICE TEST

Is Made Public After Long Delay—Figures Upon Which Awards Were Based.

Although coming more than three months after the event, the report of the Service Test of Motor Wagons promoted by the Automobile Club of America, and held in this city in April last, is, nevertheless, interesting. The awards were made public in May last, and the report merely contains the facts and figures upon which those awards were based. They will be found to afford material for study.

The report is contained in a well printed and substantial booklet of 108 pages, and deals with the test in the exhaustive manner which has long been characteristic of the club.

It will be recalled that when the awards were announced considerable surprise was caused by the failure of some cars to receive gold medals, in view of their seemingly fine performances; while others which were not supposed to have done so well were given the highest award. The appearance of the detailed figures was expected to make clear these apparent discrepancies.

In making the awards the contest committee has been remarkably generous. Of seventeen vehicles which started fifteen finished; of these fourteen were awarded medals, although the performance of some of them was extremely mediocre. The unfortunate exception was the Lansden entrant, which was appropriately numbered 13.

As stated in the rules of the test, the awards were thus based:

First, second and third medals will be awarded in each class for the best performance, based on economy of operation in time and fuel, ratio of paying load, ton mileage and general reliability and availability for service.

Under a literal interpretation of this rule, the contesting vehicles appear to have been entitled to awards in any case; that is to say, a lone entrant, no matter how poor its performance, was entitled to a medal, and to this fact some of them, notably the Union truck, owe their success. Obviously, this was a defective ruling; for it is absurd to give a car which performed badly a gold medal simply because no other car competed in that class.

The awards which excited most surprise were those in Class 1. Here the Oldsmobiles were placed first and second, getting the gold and silver medals, while the Knox car had to be content with a bronze medal. As the latter had gone through the entire week without stop or breakdown, it had been expected that it would take high rank. The appended table, however, reveals the fact that the two Oldsmobiles were clearly superior. They covered more miles in less time and with a smaller fuel consumption and

were, therefore, plainly entitled to the premier awards.

The figures in the tables covering the second class, however, are not equally illuminating. A gold medal was awarded to the

Pope Co.'s electric entrant and a silver medal to the Knox Co.'s gasoline entrant, although the latter made a better showing in every particular except that of load carried. The difference is a material one—9,665 lbs. in the

CLASS 1—TO CARRY 1,000 POUNDS OR UNDER.

Olds Motor Works, gold medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	37	32	33	37	50½	38½	228¼
Average running speed (miles per hour).....	12.9	2:35	3:05	3:37	5:18	3:33	20:59
Running time (hrs., mins.).....	2:51	12.3	10.6	10.2	9.5	10.8	10.8
Elapsed time (including all stops, hrs., mins.).....	9:44	9:57	9:28	9:10	9:28	10:04	57:51
Deliveries	39	51	53	40	38	61	282
Repairs	0	0	0	0	0	0	0
Fuel consumed (gallons).....	2	2½	2	2	2	2½	13
Load carried (pounds).....	960	940	1,250	900	1,500	1,250	6,700
Passengers	2	2	2	2	2	2	

Olds Motor Works, silver medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	45½	27½	39	34½	27½	37½	212¼
Running time (hrs., mins.).....	3:48	3:48	3:16	5:34	3:24	3:27	24:15
Average running speed (miles per hour).....	12	7.2	11.8	6.2	7.8	8.4	8.8
Elapsed time (including all stops, hrs., mins.).....	8:30	8:35	9:25	9:10	9:18	9:35	54:23
Deliveries	41	41	54	21	57	51	265
Repairs	0	0	0	0	0	0	0
Fuel consumed (gallons).....	2½	1½	2½	2	2½	2	12½
Load carried (pounds).....	1,000	1,000	1,000	1,325	1,270	1,200	6,795
Passengers	2	2	2	2	2	2	

Knox Automobile Company, bronze medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	26½	22	40½	22½	25	31½	168¾
Running time (hrs., mins.).....	4:00	4:29	6:00	4:05	3:57	5:05	27:36
Average running speed (miles per hour).....	6.5	4.8	6.7	5.5	6.3	6.2	6
Elapsed time (including all stops, hrs., mins.).....	9:00	9:20	9:55	9:19	9:05	8:50	55:29
Deliveries	43	55	50	42	34	29	259
Repairs	0	0	0	0	0	0	0
Fuel consumed (gallons).....	4½	4	4½	4	3	3	23
Load carried (pounds).....	1,271	1,225	2,100	1,079	945	1,006	7,626
Passengers	2	2	2	2	2	2	

CLASS 2A—TO CARRY 1,100 POUNDS.

Pope Motor Car Company (electric), gold medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	30½	29½	29½	33½	26½	29½	184¾
Running time (hrs., mins.).....	4:16	4:23	3:32	4:23	4:21	4:25	25:20
Average running speed (miles per hour).....	8.5	6.6	8.2	7.5	6	6.6	7.2
Elapsed time (including all stops, hrs., mins.).....	9:20	8:50	8:01	10:17	9:20	8:40	54:28
Deliveries	35	45	28	80	37	34	260
Repairs	0	0	0	0	0	0	0
Current (k w).....	7.9	6	6.9	9.6	7.9	9.6	47.9
Load carried (pounds).....	1,600	1,800	1,720	1,600	1,725	1,220	9,665
Passengers	2	2	2	2	2	2	

Knox Automobile Company, silver medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	33	22½	21	47½	39½	23½	187¾
Running time (hrs., mins.).....	4:46	4:42	2:17	3:57	3:48	2:15	21:45
Average running speed (miles per hour).....	6.9	4.8	9	12	10.4	10.5	8.6
Elapsed time (including all stops, hrs., mins.).....	9:14	9:00	9:10	9:57	9:08	9:05	55:34
Deliveries	38	30	53	55	37	58	271
Repairs	0	0	0	0	0	0	0
Fuel consumed (gallons).....	2½	4	3	5	4	4	22½
Load carried (pounds).....	1,515	1,515	1,160	1,809	1,837	1,005	9,091
Passengers	2	2	2	2	2	2	

Pope Motor Car Company (electric), bronze medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	22½	19	27½	33½	25½	40½	168¾
Running time (hrs., mins.).....	3:55	3:15	3:40	4:11	3:51	3:36	22:28
Average running speed (miles per hour).....	5.7	5.8	7.5	7.9	6.6	11.2	7.5
Elapsed time (including all stops, hrs., mins.).....	9:20	8:50	9:05	8:55	9:35	11:10	56:55
Deliveries	43	46	41	30	37	69	266
Repairs	0	0	0	0	0	0	0
Current (k w).....	6.7	6	7.2	5.4	7.4	8.1	40.8
Load carried (pounds).....	1,700	1,700	1,628	1,785	1,715	1,220	9,748
Passengers	2	2	2	2	2	2	

CLASS 2B—TO CARRY 2,000 POUNDS.

Cantono Electric Tractor Company, gold medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	29	23	22½	22½	24½	23½	145¾
Running time (hrs., mins.).....	5:17	3:41	3:24	3:47	3:46	3:47	23:42
Average running speed (miles per hour).....	5.4	6.2	6.6	5.9	6.4	6.2	6.1
Elapsed time (including all stops, hrs., mins.).....	9:00	8:25	8:56	9:12	8:43	9:25	53:41
Deliveries	27	25	34	31	32	38	187
Repairs	0	0	0	0	0	0	0
Current (k w).....	26	13.8	14.6	11.2	12.7	11	89.3
Load carried (pounds).....	2,000	2,300	2,415	1,790	2,340	2,800	13,645
Passengers	3	3	3	3	3	3	

Electric Vehicle Company, silver medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	37½	25	27½	35	34	33½	192¼
Running time (hrs., mins.).....	4:31	3:50	4:14	3:33	3:10	4:04	23:22
Average running speed (miles per hour).....	8.2	6.4	6.4	9.8	10.6	8.2	8.2
Elapsed time (including all stops, hrs., mins.).....	9:56	9:30	9:43	7:35	9:50	8:20	54:54
Deliveries	18	33	32	9	64	20	176
Repairs (No. and time).....	0	0	0	0	0	(1) 0:18	(1) 0:18
Current (k w).....	30.9	19.4	22.3	24.2	18	21.8	136.6
Load carried (pounds).....	3,856	6,450	6,635	4,890	8,500	2,400	27,231
Passengers	8	3	3	8	8	8	

case of the Pope car and only 9,091 in that of the Knox. But the latter covered 187½ miles in 21 hours and 45 minutes, an average of 8.6 miles per hour; while the former covered only 184½ miles, and required 25 hours and 20 minutes to do it, an average of only 7.2 miles per hour. Based on fuel (or power) consumption alone the gold medal winner did the better, but, as economy of time was equally considered in making the award, it is difficult to see wherein the superiority of the car ranked first lies.

In connection with the tables a detailed statement of daily repairs is given. It is interesting to learn that eight of the fourteen medal winning cars went through the six days' test without repairs of any description being necessitated during the runs. These seven comprised all the light vehicles, viz., the three in Class 1, the three in Class 1A, one of those in Class 1B and one in Class 3.

The repair record and the summary under the head of "general behavior" follows:

Class 2B, Landsen (electric):

Repairs: April 6—Repairing broken chain, 1 hour 10 minutes; not able to make last trip on Route 4, as current was too low. April 8—Repairing chain gear, 3 minutes; not able to complete last trip on Route 7 on account of broken chain gear. April 9—Trying to obtain extra links for chain, 32 minutes; repairing broken chain, 28 minutes.

General Behavior: Stopping, starting and steering excellent; performance on hills good; changes speed easily; practically noiseless; average amperage 60, voltage 65.

Electric Vehicle Co.:

Repairs: April 9—Cleaning commutator, 18 minutes.

General Behavior: Simple and efficient control of stops, start, steering and speed changing; keeps up good speed on grades; gear and chain fairly quiet.

Class 3, Consolidated Motor Co.:

Repairs: April 4—Put in new spark plug, 10 minutes.

General Behavior: Starting, stopping and steering easy; changing speed gradual by friction drive, facilitating operation in crowded streets; performance on hills good; average amount of noise; took very rough roads at full speed under load.

Class 4, Union Motor Truck Co.:

Repairs: April 4—Put in new spark plug, 10 minutes. April 5—Adjusting vibrator, 3 minutes; putting in new spark plug, 16 minutes; adjusting vibrator, 5 minutes; connecting battery, 8 minutes; putting in new spark plug, 20 minutes; adjusting vibrator and governor, 9 minutes; opened gasoline valve, 1, 8 and 2 minutes. April 7—Tightening foot brake, 6 minutes; tire forced out of clincher rim, 8 minutes; adjusting vaporizer, 2 minutes; replacing lost plug in vaporizer, 1 minute; tightening bolt in rear wagon spring, 1 minute. April 8—Connecting rod broken, 3 hours 35 minutes.

General Behavior: Control in every respect excellent; starts slowly and gradually; steering and starting perfect; little noise; climbs hills slowly but very steadily.

Class 5, Electric Vehicle Co.:

Repairs: April 8—Repairing leaky jar and cleaned, 30 minutes. At station: April 5—Substituted regular battery connectors for temporary ones and filled battery with distilled water, 2 hours 25 minutes. April 8—Repaired left hand chain, two broken links; adjusted brakes.

General Behavior: Motors quiet under load;

takes hills slowly and easily and runs well over rough roads; starts steadily; quick control of speed and steering; no volt or ammeter on vehicle.

Class 8, Fischer Motor Vehicle Co.:

Repairs: April 5—Water in gasoline; drain water from carburettor, 44 minutes. April 6—Repairing broken coupling of fan belt, 7 minutes; cap screw dropped out of engine. April 7—Repairing fan belt, 10 minutes; do.,

15 minutes; do., 9 minutes. April 8—Hot box on front axle, 1 minute; do., 8 minutes; do., 8 minutes; cooling axle with hose, 2 minutes; bearings and axle scraped after arriving at station, 1 hour.

General Behavior: Starting and stopping easy and certain; steering good; noise not excessive; no change of speed necessary on hills, which were all taken slowly but very steadily.

Charles Rockliff, bronze medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	37%	34	43%	36%	22%	29	204
Running time (hrs., mins.).....	4:38	4:39	6:02	5:03	2:59	5:14	28:35
Average running speed (miles per hour).....	7.3	7.3	7.2	7.2	7.5	5.6	7.2
Elapsed time (including all stops, hrs., mins.).....	9:00	9:10	11:44	11:20	9:00	10:06	60:35
Deliveries.....	8	5	20	20	21	31	114
Repairs (No. and time).....	(2)0:41	(6)1:22	(8)0:45	(6)1:42	(4)0:13	0	(26)4:43
Fuel consumed (gallons).....	8	10	10	9½	3	4	43½
Load carried (pounds).....	900	3,610	4,350	5,700	3,400	3,836	21,796
Passengers.....	4	4	4	4	4	4	21

CLASS 3—TO CARRY 2,000 TO 3,000 POUNDS.

Consolidated Motor Company, gold medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	28%	31½	35%	32%	58	49%	235½
Running time (hrs., mins.).....	4:00	4:17	3:15	3:47	5:17	4:47	25:23
Average running speed (miles per hour).....	7	7.3	10	8.5	10.8	10.3	9.2
Elapsed time (including all stops, hrs., mins.).....	9:10	8:51	6:12	5:30	9:56	9:10	48:49
Deliveries.....	20	33	7	5	37	35	146
Repairs (No. and time).....	0	0	0	0	0	0	0
Fuel consumed (gallons).....	4½	4½	4½	3%	5½	5½	28½
Load carried (pounds).....	3,000	4,100	3,930	2,530	7,920	4,065	28,444
Passengers.....	3	3	3	3	3	3	18

Knox Automobile Company, silver medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	31	35	37%	58	49%	28%	239½
Running time (hrs., mins.).....	4:42	3:57	3:45	5:27	4:53	2:55	25:39
Average running speed (miles per hour).....	6.5	8.8	9.9	10.6	10.2	9.6	9.2
Elapsed time (including all stops, hrs., mins.).....	10:35	6:18	7:13	9:52	9:26	8:53	52:17
Deliveries.....	34	8	4	39	35	30	150
Repairs (No. and time).....	(1)0:10	0	0	0	0	0	(1)0:10
Fuel consumed (gallons).....	6	5%	6½	7½	5½	3%	35
Load carried (pounds).....	3,497	3,628	4,600	4,475	8,200	5,330	29,730
Passengers.....	3	3	3	3	3	3	18

Landsen Motor Car Company (electric), no award.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	*33%	33	24%	26%	26%	36%	180%
Running time (hrs., mins.).....	5:50	5:15	2:42	3:29	4:09	5:20	26:45
Average running speed (miles per hour).....	5.7	6.2	9.2	7.5	6.3	6.7	6.7
Elapsed time (including all stops, hrs., mins.).....	13:00	9:42	7:51	10:02	8:30	10:32	59:43
Deliveries.....	6	0	18	20	31	7	102
Repairs (No. and time).....	0	0	(1)0:10	0	(1)0:03	(1)0:00	(3)2:13
Fuel consumed (k w).....	39.5	42.3	31.6	35.2	25.2	18.8	192.6
Load carried (pounds).....	2,300	2,788	3,456	5,800	2,165	2,720	19,229
Passengers.....	3	3	3	3	3	3	18

*Out of current, towed two miles.

CLASS 4—TO CARRY 3,000 TO 4,000 POUNDS.

Union Motor Truck Company, gold medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	34%	34%	33%	31%	20%	18%	172%
Running time (hrs., mins.).....	7:32	6:25	4:51	4:20	3:04	3:18	29:30
Average running speed (miles per hour).....	4.5	5.7	6.9	7.2	6.6	5.4	5.8
Elapsed time (including all stops, hrs., mins.).....	10:23	10:28	8:41	10:02	14:04	6:59	60:37
Deliveries.....	8	10	19	27	20	20	109
Repairs (No. and time).....	0	(9)1:18	0	(5)0:18	(1)5:35	0	(15)7:11
Fuel consumed (gallons).....	12½	14½	8½	9	7½	6	58
Load carried (pounds).....	5,000	6,550	6,663	7,454	5,200	4,384	35,251
Passengers.....	4	4	4	4	4	4	24

CLASS 5—TO CARRY 4,000 TO 5,000 POUNDS.

Electric Vehicle Company, gold medal.

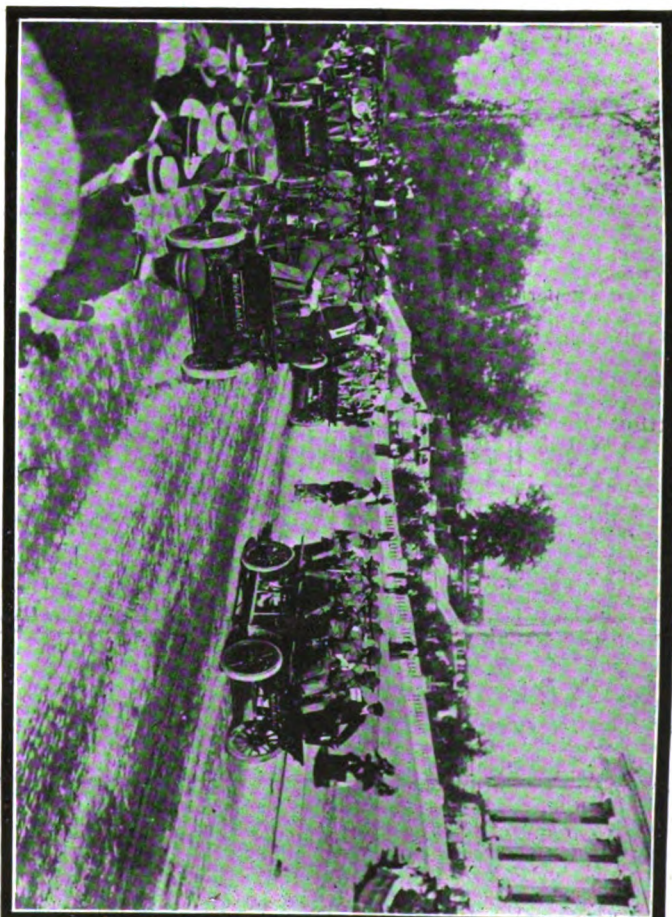
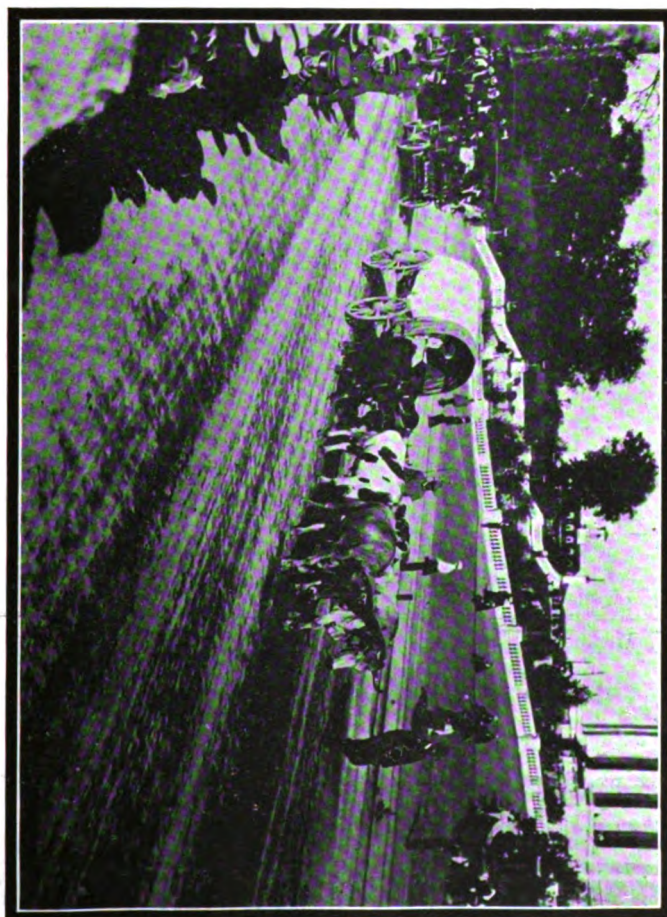
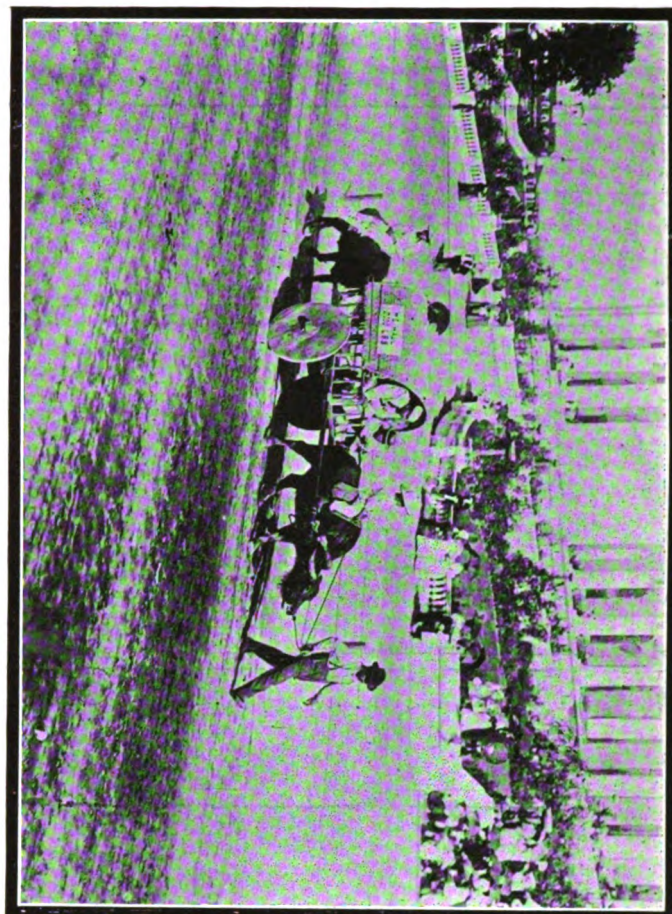
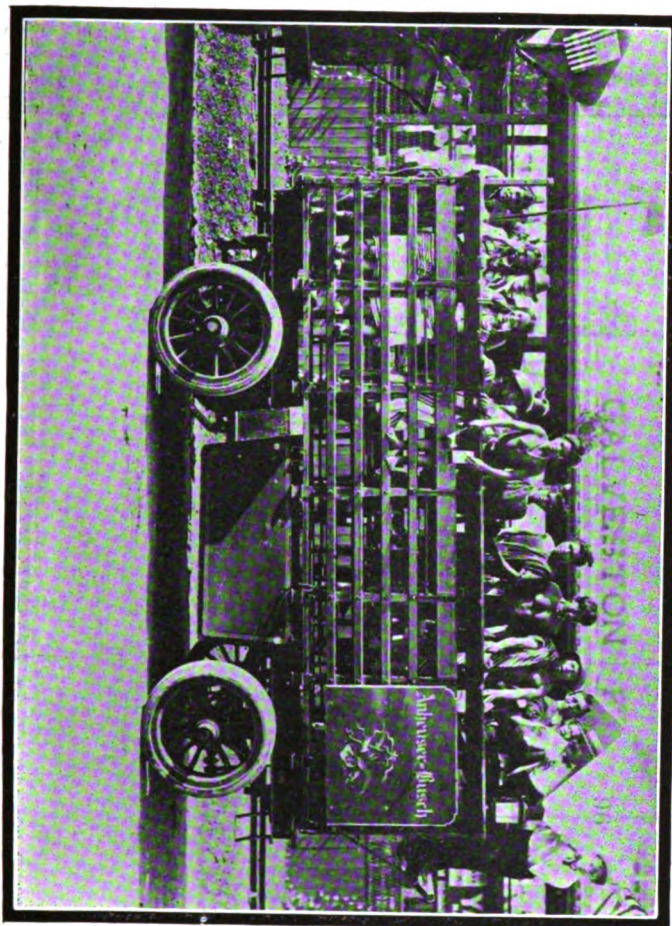
	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals. (5 days).
Distance travelled (miles).....	*28%	32	32	34%	26	26	160%
Running time (hrs., mins.).....	6:51	5:40	4:46	5:11	4:55	3:55	24:27
Average running speed (miles per hour).....	5.4	5.6	6.6	6.6	5.2	6.6	6.1
Elapsed time (including all stops, hrs., mins.).....	14:55	14:07	9:00	10:51	10:10	9:49	53:57
Deliveries.....	5	9	20	21	38	39	127
Repairs (No. and time).....	0	0	0	0	(1)0:30	0	(1)0:30
Current (k w).....	39.6	41.3	30.3	33.4	24.2	18.4	147.6
Load carried (pounds).....	6,000	5,600	8,225	13,475	8,100	7,425	42,825
Passengers.....	4	4	4	4	4	4	24

*Towed 11½ miles.

CLASS 8—TO CARRY 8,000 TO 10,000 POUNDS.

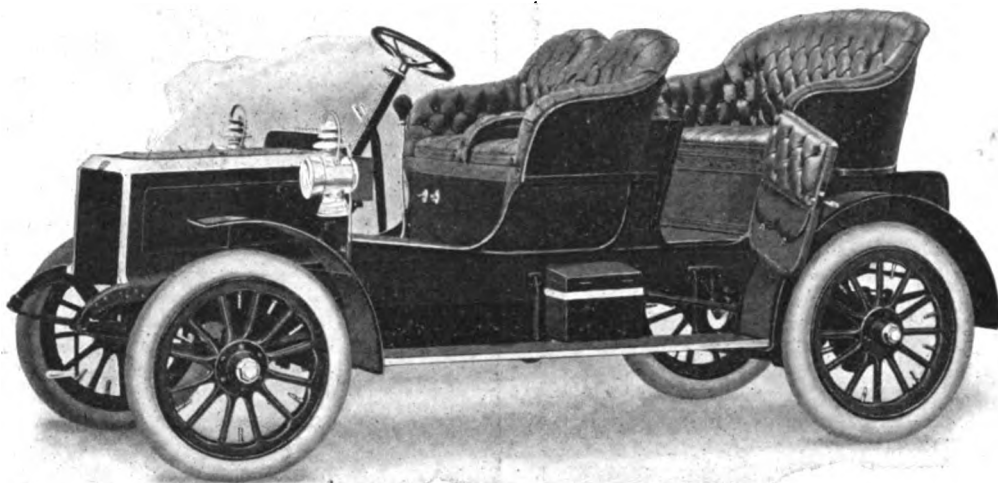
Fischer Motor Vehicle Company, gold medal.

	April 4.	April 5.	April 6.	April 7.	April 8.	April 9.	Totals.
Distance travelled (miles).....	26%	37	24%	34%	32½	32	187½
Running time (hrs., mins.).....	4:54	6:23	3:40	6:18	6:16	6:13	33:44
Average running speed (miles per hour).....	5.4	5.7	6.7	5.4	5.1	5.2	5.5
Elapsed time (including all stops, hrs., mins.).....	11:26	8:04	8:57	8:01	9:00	10:57	56:25
Deliveries.....	35	1	24	1	12	12	76
Repairs (No. and time).....	0	(5)9:44	(1)0:07	(3)0:34	(4)0:19	0	(13)11:44
Fuel consumed (gallons).....	19	22½	20½	21½	20	21	124½
Load carried (pounds).....	11,400	10,500	8,030	9,210	10,000	9,030	58,170
Passengers.....	4	4	4	4	4	5	25



VIEWS OF THE "TRANSPORTATION DAY" PARADE AT THE ST. LOUIS EXPOSITION, JULY 30.

WINTON



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There are troublous times about New York City just now because the automobile is being made a scapegoat in consequence of the general remissness of steamboat inspectors which culminated in the horrible loss of life when the steamer General Slocum burned. The steamboat inspectors were roused to new activity, and, among other things, one hit upon the idea of investigating the carrying of automobiles by the ferryboats that run to Brooklyn. Having investigated, he ordered the ferries not to carry any vehicles containing gasoline and having fire in them under penalty of \$500 fine. The ferries promptly shut down, and for a few days those going by ferry to Brooklyn had to stop their engines and push their cars aboard the boat by hand. This lasted only until last Sunday, and then the ferry from East Twenty-third street, the one most used by automobilists, refused absolutely to carry motor vehicles, whether their "fire" was out or not and whether or not they had gasoline on board. Drivers of cars offered to empty their gasoline tanks into the street and push the cars aboard, but they were turned away. Even motor bicycle riders were refused when they offered to empty their gasoline tanks and remove them. They could not buy ferry tickets. The ferry company claimed that allowing motor vehicles to be pushed aboard by hand interfered with traffic, but the absurdity of this in the case of motorcycles is apparent, for they have always been pushed aboard the ferryboats by hand.

This happened at a time when the automobilists were feeling secure after three years of non-interference because of the amendment they secured to the old United States Treasury law. The original law prohibited the carrying of gasoline or any explosives on passenger steamers. This was amended so that steamboats were permitted to carry automobiles carrying gasoline, "provided their fires, if any, were extinguished." The steamboat inspectors, however, interpret an electric spark as fire, and said they must not be run on board under their own power. So the Brooklyn Ferry Co. issued a general order to this effect.

The ferries affected by the order are: Forty-second street to Broadway, Brooklyn; Twenty-third street to Broadway, Brooklyn; Twenty-third street to Greenpoint; Tenth street to Greenpoint; Grand street, Manhattan, to Grand street, Brooklyn; Grand street to Broadway, Brooklyn, and Roosevelt street to Broadway, Brooklyn.

Of these the ferries from East Forty-second and East Twenty-third streets are the only two that have had any considerable automobile traffic.

Regarding the order Captain Frank Stoney, superintendent of the Brooklyn Ferry Co., said:

"We have issued the orders for the simple reason that there is a fine of \$500 for each case where a gasoline automobile is carried with the spark lighted. Of this fine \$250 goes to the informant. We want to carry the automobiles. It is our business to carry anything that we can, and it is part of our revenue. There is no more danger in one of these machines than there is in lots of other things we carry. As it stands now, only electric machines can be carried.

"The rules of the Department of Commerce and Labor are so rigid that we must issue the order. It is now up to the department or up to the Automobile Club of America to get this ridiculous law changed. It should be changed at the earliest possible moment."

The rule is enforced on the Staten Island ferry, but not on the North River lines.

In this dilemma the Automobile Club of America stationed men at the Twenty-third street ferry to direct automobilists from there to the bridges.

The Automobile Club had been in close correspondence with the ferry company, and it was supposed that the shutting down absolutely of the ferry was agreeable to the club because it made the hardship greater and reduced the situation to absurdity, which would help the case of the club in seeking to have the law changed or differently construed.

At the meeting of the governors of the Automobile Club on Wednesday the following resolution was adopted:

"Resolved, That a special committee, consisting of Mr. Jefferson Seligman and Mr. W. W. Niles, counsel of the club, communicate at once with Secretary Metcalf of the Department of Commerce and Labor and endeavor to secure from him a fair and liberal interpretation of the present statute so as to permit of the carrying of gasoline motor cars on ferries."

Beyond giving out this resolution none of the officials of the club were communicative. President Scarritt admitted, however, under questioning, that other steps would also be taken looking toward an interpretation of the law by the courts. When asked if the ferry could not be proceeded against under its charter as a common carrier, he said:

"No, because the law is permissive and not mandatory. The ferry refuses to carry motor vehicles because it is threatened with a fine. What we want is some interpretation of the law that shall not decide the electric spark, which is not present after the motor stops, to be fire. I can't say, however, what sort of a case will be prepared to bring the matter into court."

It will be seen that even under such a decision as President Scarritt says is wanted that steam vehicles would still be barred.

Elements Force Ellis to Quit.

Although more than six hours ahead of the record, Jerome A. Ellis and A. C. Schmidt, who left Chicago last Wednesday morning in an Apperson car to shatter the time between that city and New York, were forced to abandon their trip on Thursday at Binghamton, N. Y., on account of rain and bad roads.

AFTER CORNELL WITH A STICK

Automobile Club Governors Will Try to Have
Him Deposed for Inciting Riot.

At their meeting of the dog days, held last Wednesday, the governors of the Automobile Club of America decided to become strenuous. They tackled Magistrate Cornell for his shoot 'em up utterances, declared that young Deputy Sheriff Wicks will be prosecuted to the utmost, and then they decided to do something right away to relieve the situation that has arisen owing to the ferries refusing to carry automobiles.

The subject of Magistrate Cornell's recent utterances from the bench, in which he said that a citizen would be justified in shooting a speeding automobilist who frightened his horse, was discussed by the governors in connection with the shooting at Patchogue by Deputy Sheriff Sherman F. Wicks at John Foley, Jr., of New York, one of the club's members, as if there was some direct relation between the two. This was made plain by remarks made after the meeting. Indeed, it is evident from the formal resolution adopted that the governors hold the shooting to have been influenced by the remarks of the justice. This is the resolution adopted in the matter:

"Resolved, That charges be preferred against City Magistrate R. C. Cornell to the Appellate Division of the Supreme Court of this department as being an unfit person to preside on the bench, as he has by his utterances from the bench incited citizens of this State to rioting and to the taking of human life; that such utterances have borne fruit is evidenced by the fact that an innocent man, driving an automobile, who was declared by the court to be not guilty of violating the law, was shot at by a deputy sheriff."

None of the governors were communicative after the meeting; in fact, they all hurried from the clubrooms. It was learned, however, that the case of Wicks has not been dropped, but that he will be prosecuted by the club, even though he has resigned, and that his arrest may be looked for at an early date.

The action taken in the matter of ferries carrying automobiles is told about elsewhere.

First Acquittal Under Speed Law.

John J. Kelliher, an automobile agent of Salem, Mass., has the distinction of being the first man arrested in Boston on charges of violating the speed law who has won his case and been acquitted. Kelliher was demonstrating a car at the time of his arrest, and had his customer for a witness to the fact that at the time he was illustrating to how slow a speed the car could be throttled down.

In Oswego, N. Y., automobilists are prohibited from tooting their horns on Sunday.

California Men's Big Project.

A million-dollar automobile plant is the ambitious project which Los Angeles, Cal., men have in contemplation. Behind the project are men of wealth and high business standing, and should they determine that their project is feasible they expect to make the enterprise one of the largest of its kind in the United States.

The promoters of the scheme are A. P. Fleming, secretary of the Automobile Club of Southern California; B. H. Cass, president of the Cass-Damarel Hardware Co.; Charles Wellborn, the attorney; J. O. Koepfli, president of the Municipal League; Roland P. Bishop and W. T. Bishop, Jr., of Bishop & Co., manufacturers.

The company will make use of the newly invented rotary type engine, letters patent to which have been granted to Charles R. Twitchell, of the Brown-Winstanley Co., of Los Angeles. The syndicate has secured an option on a half interest in the patent, and Mr. Twitchell now is building a 15 horsepower touring car, upon the successful completion of which depends the formation of the manufacturing corporation.

The car will have, it is said, an engine of the rotary type, light and compact. Its cylinders are cooled by air, and are placed in the flywheel. The sample car will have five cylinders, which will be connected with the crank shaft. This will also contain the gasoline supply and the spark.

Still Adding to Olds Plant.

Expansion is still the order of the day at the Lansing plant of the Olds Motor Works. The contract has been let for two large buildings, to be used as a blacksmith shop and a pattern vault, respectively.

The two buildings, the construction of which will be begun at once, will be erected parallel with the recently completed buildings, the paint shops and erecting room. The blacksmith shop will be constructed entirely of brick and steel, and will cover an area of 238x70 feet. The forging machinery placed in this shop will be of the latest designs.

The pattern vault is to be built of brick and cement, being fireproof, as no wood will be used in the construction. The building will be 70x70 feet.

Goodrich Builds a Garage.

What is claimed to be the first regular automobile garage erected for the exclusive use of officers and employes has been completed by the B. F. Goodrich Co., Akron, Ohio. The building is a frame structure, and cost \$500. It will house the dozen or more cars which are used regularly by the Goodrich people. A man will be placed in charge to care for the cars and to oil and clean them.

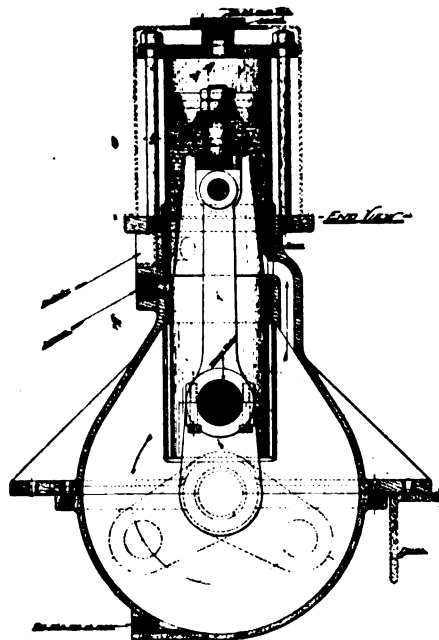
Building for Norton & Fuller.

Work has been commenced on a building at Lowell, Mass., to be used as a garage by Norton & Fuller. There will be entrances on both Warren and Hurd streets, with floor space sufficient to store one hundred automobiles.

Promises 14 h. p. Car for \$700.

A three cylinder 14 horsepower car for \$700 is the promise of the recently organized Hyne Motor Co., of Plainfield, N. J. The motor itself, which will be sold separate when desired and which is practically ready for marketing, will be listed at a corresponding figure. The motor is of the two-cycle type, and develops 14 horsepower by brake test at 800 revolutions per minute. Apart from its mechanical features, its weight and dimensions are pointed to with pride by its makers—300 pounds, including flywheels of 16 inches diameter; the length of the engine from face to face of flywheels is 20 inches, and the height also is 20 inches.

The motor is so constructed that it is to all effects and purposes three engines com-



bined in one. For example, it is possible to remove one or two cylinders and the engine will run just as though all were in place. Any piston, piston ring or cylinder can be removed for examination in ten or fifteen minutes and replaced in a similar length of time. The cylinders are constructed of Shelby steel tubing, and are driven in the crank case on a taper; they are held in place by four long studs. The cylinder heads are held in position by nuts on these studs, and every part can be taken down with ease.

All running bearings are phosphor bronze, with scraped joints. Not a particle of babbit is used. The crank shaft is one piece of steel, and the connecting rods are steel with bronze bushings. The flywheels can be removed easily, as they are held in place by bolts and are not driven on, as is usually done.

Paris Show Dec. 9 to 25.

December 9 to 25 are the dates that have been set for the seventh automobile exposition to be held at the Grand Palais, Paris. The committee of organization has voted to adopt the rules and regulations of the last exposition.

N. A. A. M. Committee Discusses Shows.

A meeting of the executive committee of the National Association of Automobile Manufacturers was held at the New York offices on Tuesday. Only nine were present, and Vice-President S. T. Davis, Jr., presided in the absence of President Windsor T. White. The meeting was a short one, and little actual work was done beyond listening to the report of the show committee and ratifying its action. Under the plan adopted of sanctioning local shows, it is expected to reduce their number and keep them out of the hands of promoters not identified with the trade. The muddle over the Boston show, which is told about elsewhere in this paper, was discussed, but was finally laid on the table without any action being taken.

The Week's Incorporations.

Rahway, N. J.—D. R. Dunham & Son, under New Jersey laws, with \$100,000 capital, to manufacture and deal in coaches, automobiles, cars, bicycles and boats.

St. Louis, Mo.—Macnish Automobile Co., under Missouri laws, with \$10,000 capital. Corporators—Fred J. Macnish, James Macnish, Ralph B. and L. Macnish.

Portland, Me.—Imperial Electric Motor Co., under Maine laws, with \$1,000,000 capital. Officers—President, M. W. Baldwin, Portland, and treasurer, H. T. Mason, Portland.

Peoria, Ill.—The Peoria Automobile Co., under Illinois laws, with \$5,000 capital; to manufacture motor vehicles. Corporators—S. K. Hatfield, Charles L. Gage and E. M. Giles.

Tennant Leases Erie Plant.

The Tennant Auto Tire Co., of Springfield, Ohio, has leased part of a tire plant at Erie, Pa., and will proceed to manufacture a portion of its product there. A force of men has been put to work, and completed tires will be turned out in a short time.

A plan is on foot to secure additional capital for the company with which to erect a factory at Springfield adequate to cope with the steadily increasing business of the concern. If the desired response is received the plant will be ready for operation next spring.

Addition for Gray & Davis.

Evidence of Gray & Davis's prosperity is apparent at Amesbury, Mass., in the shape of a big brick addition to the plant, that is now being erected. That it will add considerably to their facilities for producing their well known lamps goes without saying.

Pope Closes Philadelphia Branch.

It has been decided by the Pope Mfg. Co. to close its branch store in Philadelphia. The policy of the company there hereafter will be to establish agencies having no direct dependence upon the home concern.

Fire on Thursday last damaged the plant of the Locke Regulator Co., Salem, Mass., to the extent of \$4,000.

RACED ON SACHUSET'S SANDS

Spectacular but Uninteresting Meet Held at Newport—Beach was Soft and Obstructed.

On the shifting sands of Sachuset Beach, near Newport, R. I., last Saturday, a most picturesque, if not exciting, race meet was held in the presence of an assemblage of nearly 18,000 people. Promoted by a group of automobile enthusiasts who are also members of Newport's most exclusive circles, with "Reggie" Vanderbilt as the directing spirit and Colonel John Jacob Astor as one of the chief drawing cards, it offered the general public one of the too few opportunities for observing the socially elect at close range. Consequently, there was an outpouring of the populace for miles around; they came by railroad, by boat, in equipages of all sorts and conditions—including automobiles—and on foot. Proletariat rubbed elbows with the patricians and hot polloi gazed their fill at the celebrities whose names figure in the society columns of the newspapers.

As a spectacle the function was inspiring; as an exhibition of automobile racing it was as dull as the proverbial ditchwater. The race course was about as unsuitable as it could be. Instead of a wide, smooth, hard beach, such as was promised, there was a stretch of sand that at the beginning resembled a ploughed field. Later, when it had been passed over by scores of heavy cars, it was rolled into some semblance of a race course. But it was not free and unobstructed as it should have been. There were two piles of rocks near the start, and a large group of them a little distance beyond the finishing point, thus handicapping the contestants at both ends. There were no close contests, most of the events being runaways. With the exception of one race, when the mile and one-eighth course was covered in 1:03¾, the times were slow, due to the heavy going. Toward the end of the afternoon the incoming tide encroached on the course, already partly overrun by the curious spectators, and still further hampered the operators of the cars.

Of all the Newport summerists who entered their cars, Colonel Astor alone essayed the task of driving it—as it turned out, to defeat. His tall form and shining bald pate, bronzed by exposure to the sun, were conspicuous and seemingly familiar to nearly every one. "Reggie" Vanderbilt, who was too much engrossed in his multifarious managerial duties to pilot his car, saw his chauffeur go down to defeat also.

The officials, who were all from the ranks of the "Four Hundred," had their hands full. Before the first race was called there were exciting scenes among the officials at the finish, which was at the western end of the beach, all of them being unfamiliar with the management of race meets. The crowd had broken down the rope which had been stretched to keep back those who might get in

the way of the machines, and hundreds flocked indiscriminately on the beach. Now and then a car which was out for a tuning up would whiz by like the wind, and all would run for cover, but the terror was shortlived. Workmen were nailing down to stakes in the ground the blue ribbon which marked the finish, and photographers were running around like nervous hunters in an African jungle, trying to get good pictures of the notables of Newport society, who were all in attendance.

The noteworthy features of the racing were the defeat of Harkness by E. R. Thomas, both driving Mercedes cars, in the remarkable time of 1:03¾, and the victory of A. E. Morrison (Peerless) in the final heat of the 24-horsepower class. In the former Thomas secured a long lead, but Harkness was gaining rapidly at the finish. Morrison defeated a number of foreign cars, securing his victory in a clever manner.

The summaries follow:

Class 1, open to all motor cycles; prize, silver bowl, value \$75—Won by Oscar Hedstrom's Indian, 3½ horsepower; John Mc. Nevins's Rambler, 1¾ horsepower, second; William Thaw's Indian, 1¾ horsepower, third. Time, 1:27.

Class 2, open to open electrics; prize, silver cup, value \$100—Won by H. Bull, jr.'s, Waverley, 3 horsepower; Herman Oelrichs, jr.'s, Waverley, 3 horsepower, second; Elisha Dyer, jr.'s, Waverley, 3 horsepower, third; J. Mitchell Clark's Waverley, 3 horsepower, fourth. Time, 3:32½.

Class 3, local gasoline cars, not exceeding 10 horsepower, to be raced in road condition; prize, silver cup, value \$100—First heat won by Philip F. Conroy's Stevens Duryea, 7 horsepower; John Jacob Astor's Cadillac, 8 horsepower, second; T. Shaw Safe's De Dion Boutin, 6 horsepower, third. Time, 1:59.

Second heat—Won by Pembroke Jones's Renault, 10 horsepower; William P. Thompson's Renault, 10 horsepower, second; Peter D. Martin's Renault, 10 horsepower, third. Time, 2:00.

Final heat—Won by Pembroke Jones's Renault, 10 horsepower; Philip F. Conroy's Stevens-Duryea, 7 horsepower, second. Time, 1:56 3-5.

Class 4, for local gasoline cars exceeding 10 and not exceeding 24 horsepower; prize silver cup, value \$100—Won by Harry Hamlin's Panhard Levassor, 24 horsepower; John Jacob Astor's Mercedes, 20 horsepower, second; Miss M. C. Bishop's F. I. A. T., 16 horsepower, third; Reginald C. Vanderbilt's Mercedes, 18-22 horsepower, fourth. Time, 1:35¼.

Class 5, open to all gasoline cars not exceeding 28 horsepower; prize silver cup, value \$100—First heat won by A. E. Morrison's Peerless, 24 horsepower; John Jacob Astor's Mercedes, 20 horsepower, second; Reginald C. Vanderbilt's Mercedes, 18-22 horsepower, third. Time, 1:29.

Second heat—Won by Harry Hamlin's Panhard Levassor, 24 horsepower; H. Ernest Rogers's Peerless, 24 horsepower, second;

Miss M. C. Bishop's F. I. A. T., 16 horsepower, third. Time, 1:37.

Final heat—Won by A. E. Morrison's Peerless, 24 horsepower; Harry Hamlin's Panhard Levassor, 24 horsepower, second. Time, 1:27.

Class 6, open to gasoline cars exceeding 24 horsepower; prize silver cup, value \$100—Won by Edward R. Thomas's Mercedes, 60 horsepower; H. S. Harkness's Mercedes, 60 horsepower, second. Time, 1:03¾.

Show and Races at Long Branch.

Another "coast automobile association" has been launched by "Senator" W. J. Morgan, the tireless promoter of seashore and mountain contests. This time it is the New Jersey Coast Automobile Association, formed for the furtherance of a week-long carnival at Long Branch, August 15-20.

In promoting this affair, Mr. Morgan is acting in behalf of the summer residents. There will be an automobile show all the week, races on the beach and on the track at Elkwood Park, and parades. The programme in full is as follows:

The automobile show in the West End Casino will open on Monday morning, August 15, at 9 a. m., and continue each day from 9 a. m. to 10 p. m.

On Monday, August 15, at 2:30 p. m., there will be races at a quarter and half mile, for various machines, on Ocean Drive. Especial permission has been granted by the Mayor and Council for the use of the boulevard. As there are no records for one-quarter and one-half mile straightaway, new records will be established in these races.

Wednesday and Thursday, August 17 and 18, there will be races on the Elkwood Park one-mile trotting track, at various distances from one mile to one hundred miles. There are no records from twenty-five to one hundred miles, and so records for from twenty-five to one hundred miles will be established. On these two days an uncommon feature in this country will be given, and that is an automobile gymkhana, which proved so successful at Ostend recently.

On Saturday, August 20, will occur a floral parade. The parade will start at 2:30, as will also the races at the track.

The concluding event of the week will be an invitation automobile ball in the Holly-wood Hotel ballroom.

Entry blanks for the races, fifteen in number, and all other particulars, can be had from W. J. Morgan, 1 Maiden Lane, New York. Telephone 984 Cortlandt. Gold, silver and bronze medals will be given for the races, and handsome prizes for the floral parade.

Obstacle Contest in City Street.

Automobilists of Columbus, Ohio, have hit upon a plan for attracting attention to roads in neglected condition. The club there has proposed to hold an obstacle contest in Broad street and offer a prize to the car that avoids the most holes.

A FIRST LESSON IN DRIVING

Timely Hints to Novices Who Make Their Initial Essay at the Wheel.

It is a good idea to make the first attempt to steer a car where the traffic is not likely to interfere with the operation. A wide road should be selected, and after starting up the engine in the usual way, put the first speed gear in position and drive slowly. Remember that the power can immediately be disconnected from driving the car on simply depressing the clutch pedal.

Run the car and practise letting it come to rest and starting up again. When you can do this readily and without jerking, by simply using the clutch pedal, then leave the clutch in and try the effect of advancing and retarding the spark. You will thus see how the car speed can be readily altered by this means alone. Then try the same thing with the gas throttle, but when slowing right down remember also to retard the spark, otherwise the mixture will be fired too early, and a knocking will ensue which may damage the engine. If at any time a knocking in the engine is heard, then either the ignition is advanced too far or the cylinder has become overheated and dry, the lubricating oil either being used up or not supplied in sufficient quantities to guarantee sweet running. Immediately correct the time of sparking or give a supply of lubricating oil, if required.

After you feel quite at home on the first speed gear, even when the engine is raced to its highest speed and hence the car is run at the highest speed possible on that gear, you may then try on the second speed. In changing gear, partly close the throttle so that the engine will not race immediately the clutch pedal is depressed, and then quickly change the gear, let in the clutch and quickly open the gas throttle. Always at the first or few following attempts change the gear while on the level, as it is slightly easier than gear changing when ascending a hill.

Practise taking out the clutch and applying the brakes to obtain confidence, and if you feel that the car is likely to get out of control, immediately close the throttle, which should at once steady it, and if this does not appear to be sufficient, then use the foot brake. The hand lever brakes are best used as emergency brakes and for holding the car when it is left standing on a hill. After getting used to all the forward speeds, let the car come to rest and try the reverse gear. Exercise care with this, as the car will be more difficult to manage when travelling backward. The same remarks apply to this gear as to the first speed forward.

When the novice has thoroughly mastered the control on any speed, he must then try turning corners and passing other vehicles slowly, always observing the rule of the road and making liberal use of the horn. Having got through this stage, confidence

will be fully established, and in most cases no trouble will be experienced in managing the car and effecting the necessary adjustments or replacements that from time to time may be required.

At this point a word of warning becomes necessary. When the car appears to be thoroughly controllable, there always appears to be a tendency to "let yourself go" or to "show off" to your friends. Never do this, but always be on the alert for emergencies, for the best driver is not the man who can run a certain car the fastest on a clear road, but is he who respects the rights of others and always keeps himself out of tight corners; but if, through the fault of others, he is forced into one, then extricates himself without damage and injury by keeping a clear head and firm hand. Always keep the engine in gear with the driving axle when descending steep hills, as the engine can be converted into a brake either by closing the throttle or switching off the spark, and in a number of cases this is all that is required in descending a hill. Remember that it takes a longer distance in which to pull up when descending a hill than when on the level or uphill; therefore one can travel safely faster on the level and uphill than downhill.

Short Circuits Detected in the Dark.

It is a good plan to look round the wiring of the electric circuit in the dark while the engine is running, if any short circuiting is suspected. This is immediately shown up by faint signs of sparking at the point where the short circuit takes place. Never take the low tension circuit wires across or within three-eighths inch of the high tension terminals of a coil, otherwise a short circuit is almost sure to be caused, with its consequent irregular firing, and this can only be quickly detected in the dark as suggested above.

Owing to the action of oil and battery acid which may find their way on to the insulated wire used in wiring a car, it becomes necessary to rewire some portion of the circuit. In doing this always leave three or four inches of wire wound up in the form of a spring, say, round an ordinary lead pencil, so as to allow for breaking of the wire at the terminals or wastage in the various ways that always seem open. There will then be no necessity to stretch the wire, and so take the chance of it breaking inside the insulation or cutting through the insulation and forming a short circuit on some part of the metallic frame.

Tape Exposed Fake Trap.

Among the odds and ends carried on cars a measuring tape may be numbered to advantage. One motorist found himself well repaid for his thoughtfulness in carrying such a tape along. Stopped by the usual type of "b'gosh" constable, charged with exceeding the legal speed over a measured course, he proceeded to test the length of the eighth of a mile that had been marked off. He found it to be only 202 yards instead of 220, thus carrying such confusion into the constables' ranks that he was discharged by the magistrate before whom he was brought.

ON THE WHITE HORSE PIKE

Famous Highway to Atlantic City Patrolled by Constables on Alert for Speeding Motorists.

Determined to put a stop to the speeding of automobiles on the White Horse Pike, the main highway to Atlantic City, N. J., Prosecutor Lloyd, of Camden, has organized a posse of constables to patrol the road on Saturday and Sunday to see that the legal regulations were strictly complied with. The constables are stationed at Oaklyn, Clementon, Berlin, Waterford and Magnolia.

County Detectives Smith and Cherry rode the entire length of White Horse Pike from Camden to Winslow Junction, while the constables were posted at the principal points in the villages above named. Each was provided with a red flag and a stop watch by Detectives Cherry and Smith, and as automobiles came whisking along the pike they were stopped by the waving of the red flags. Those who travelled southward were stopped at Oaklyn, six miles south of Camden. The constables examined the automobilists' license tag, lights and brake, gave him some wholesome advice about reckless driving and the penalties therefor, and let him proceed. This procedure was repeated by the other constables at Snow Hill, Clementon, Winslow and Berlin, within a distance of about twenty-five miles on the White Horse Turnpike. Northbound automobilists were similarly treated.

In all twenty-five automobilists were stopped in one Sunday on the White Horse Pike. A few remonstrated against the hold-ups, especially at Waterford, where Constable Bow Bates barred the automobilists' way by running a shelving wagon across the road. All, however, eventually took the matter good naturedly and promised to abide by the requirements of the law in the future.

The patrol will be kept on duty every Saturday and Sunday during the automobilizing season.

Take Time for Voltmeter Readings.

A voltmeter reading of accumulators should not be taken hastily. It often happens in overhauling the ignition system when hunting for causes of trouble that the voltmeter is not used until the battery has had time to recuperate itself and temporarily gives its full voltage. It is advisable, therefore, to keep the connecting wires in position for at least half a minute. If the battery is really discharged, the needle will by the end of this time recede toward zero, indicating a voltage of less than 1.8 per cell.

Don't "Bang in" the Clutch.

Few novices use the clutch of a car properly. They obtain their new car, start off on it, change the gears, letting in the clutch "bang" each time, and wonder that the car does not get away. A delicate use of the clutch is essential for good driving, as the engine should always be allowed to "get away" before the clutch is fully engaged.

MEDIUM-PRICED CARS

A Cheap, Simple and Durable Vehicle Needed for Men of Moderate Means.

Ever since the beginning of motoring in this country there has been a great demand for a small car which the man of moderate means can procure and maintain. Most of the cars of the early period were large, cumbersome and expensive, and required a small engineer's shop to keep them in running order. Those who bought them were affluent individuals who could afford to pay down £1,000 or so with equanimity, and after the season was over generally treated themselves to a new car. The tire bills alone accounted for nearly half the yearly expenditure, and some motorists wore out a set of tires in less than a month, says E. P. Bowen in the *Autocar*.

At first the demand for a cheap car was unheeded, and the manufacturers, both French and English, continued building large and costly machines. After some time a few makers placed on the market something cheap and small, which was not inappropriately called a *voiturette*. This car usually had a little $3\frac{1}{2}$ horsepower motor, which was either placed under a diminutive bonnet in front or beneath the back seat. It was belt driven, and had wire wheels. However, the public did not fancy these little cars, which were so toylike in appearance and fragile in build.

It was a common sight in those days to come upon one of these *voiturettes* in a lonely country lane, with the owner prostrated underneath, fiddling with some part of the machinery, which was placed in such an inaccessible position that it could only be got at by underdoing contortions that an acrobat might well envy.

After a while the supply of small cars stopped, and the public waited patiently for their cheap car to appear. Then about eighteen months ago the market was suddenly flooded with inexpensive cars, both French and English. Each week fresh *voiturettes* appeared in the motor journals, and for the time being the motoring world seemed crazy over this sudden inundation of small cars.

Although they are a distinct advance on the old ones, many of these cars are not altogether satisfactory. Most of them follow too much on the lines of the large ones, especially regarding the shape of the bonnet, which is often made big enough to inclose a powerful four cylinder motor, whereas it really conceals one of only about six horsepower.

Now, what is wanted by the majority of the middle class is a cheap, simple and reliable car to seat four people comfortably. They do not wish for a greater speed than the new legal limit, and so consequently it would be better to have solid tires, which are much cheaper than, and last twice as long as, pneumatics.

Their ideal car must be rid of all complica-

tions except where absolutely necessary, so that a man with average intelligence can manage it himself without the aid of a mechanic. However, our makers still persist in following the lines of large cars, and so produce *voiturettes* that have most of the disadvantages of those cars and few of their advantages.

What the makers ought to do is to start on entirely new lines and produce a small car—not *voiturette*—that is perfectly simple and fool proof. It ought not to possess any such formidable mechanical devices as friction clutches or gear boxes full of hidden mysteries, which to some people seem almost incomprehensible.

Now, the car which is about to be described will no doubt be sneered at and ridiculed by most motorists, but they must bear in mind that it has for its distinctive features cheapness, simplicity and durability. The motor should be of at least 8 brake horsepower, and for simplicity's sake should have only one cylinder. Although on the whole I prefer high speed motors, I think in such a case as this, where there is to be only one cylinder, and that a big one, a slow speed motor is preferable. It should be placed under the footboard, as this allows the body to be more roomy, with the same length of chassis, than if it were situated under a bonnet. The crank chamber should have a large inspection lid, so that the brasses of the big end of the connecting rod can be adjusted easily. It is a pity that some of the leading makers fail to have inspection doors on their motors, as it is most annoying to have to dismantle the whole engine just to tighten a loose bearing.

The ignition should be magneto, as this requires less looking after than the high tension and dispenses with troublesome accumulators: also if it breaks down the fault can be easily detected, for in ninety-nine cases out of a hundred it will be some mechanical derangement, while in the high tension kind one may search for hours without ascertaining what is wrong. The cooling apparatus should be as simple as possible, and for this reason the thermo-syphon system should be used, it being quite as efficient as the pump-circulation; in fact, several well known French firms fit it to all their cars.

Now comes the subject of transmission. This might be with advantage of the old Benz type, so long as the belt is protected from mud and wet by a metal case. This system of transmission has the advantage of being cheap and durable, which in the present case is of great importance. The frame should preferably be of ash, strengthened with steel flitch plates. It would be desirable to have wood wheels instead of wire ones, for, though the latter are cheaper, they are difficult to clean and liable to collapse suddenly if a spoke should be broken.

Either a tonneau or a double phaeton body could be fitted, according to taste. Such a car as this would meet most of the requirements of the man of moderate means. It would be easy to drive and to look after, and, if turned out in large quantities by a good firm, should not cost more than £200 to buy.

DANGER IS DECREASING

Combustibles Inspector States that Gasolene Accidents are Fewer—Regulations for its Storage.

In speaking of the use of gasolene in New York, George E. Murray, inspector of combustibles in the boroughs of Manhattan and The Bronx, who has held this office upward of a dozen years, and who has had a wide experience with explosives of all sorts, recently said:

"You may say that the common people in this city have been educated up to such a thorough understanding of the dangers of careless use of gasolene that accidents are constantly becoming fewer. This knowledge has come partially through our efforts and partially from bitter experience.

"As to fatalities in Greater New York resulting from explosions of naphtha, under the head of which gasolene is classed, the number is astonishingly small. According to officials of the Health Department, there was but one death from burns from gasolene during the year 1902, while during the year 1903 there were but three deaths from the cause 'explosive compounds,' under which head is also included gasolene."

When asked about gasolene for automobiles, Mr. Murray said that, under the commission's regulations, no private party in New York can keep on his premises more than one barrel of it, and that of this quantity but five gallons are permitted to be above ground, and that only in a special receptacle. The regulations are quite plain as to automobile storage stations. They declare that the storage tanks must be of a design and location approved by the Fire Commissioner, and that the top of the tank must be at least two feet below the surface of the ground. Mr. Murray said that, so far as gasolene automobiles themselves were concerned, he had no jurisdiction in the matter.

Gasolene comes under the head of naphtha in the regulations, and naphthas are described therein as fluid products of petroleum, coal tar or shale oil, which emit an inflammable vapor below the temperature of 100 degrees Fahrenheit, and such as are customarily adapted for use as fuel, lighting agent, motive power, solvent or detergent.

He Proved an Alibi.

How great are the facilities for blackmailing afforded by the numbering system was pointed out by a Camden (N. J.) motorist recently. He said that he had received a notification from a New Brunswick man that his automobile, giving the number, had collided with his team, and unless he sent on his check for \$2,000 he would immediately enter suit for \$3,000. It became necessary for the motorist to file an affidavit at New Brunswick to the effect that he had not been in New Brunswick for at least a year preceding the time the accident occurred. This, of course, caused the suer to desist.

WHITE BULLETIN
NUMBER SIX

CONTAINS THE
PRELIMINARY
ANNOUNCEMENT OF
THE 1905 MODEL
**WHITE STEAM
TOURING CAR**
THE WHITE SEWING MACHINE CO., CLEVELAND, O.

Have You Motorpathia Cerebralis?

Motorpathia cerebralis is the newest disease to which the flesh of motorists is heir to. It is not to be found in the official nomenclature of diseases, and yet there are a good many patients who have suffered from it during the last few years, it is asserted by the Medical Press and Circular.

The yachtsman suffers from mal-de-mer, the mountaineer from mal-de-montagne and automobilists from motorpathia cerebralis, it says. The vibration of the car, especially at high rates of speed, produces in some the same temporary disorganization of function in the semi-circular canals, and their nervous supplies, that the motion of the ship does in the seasick passenger, and nausea, giddiness and headache are the result of a fast journey over a rough road.

Fortunately, the art of the car builder is able to reduce this disadvantage to a great extent by providing large and powerful springs, but some people, especially ladies, suffer considerably from the jolting and swinging of the car. The frequent use of the car in everyday practice in a district in which the roads are bad seems to tend to upset the normal equilibrium of the nervous system, and unsteadiness of gait and shakiness of the hand result.

A Demonstrator of Resource.

The value of the resourceful man was illustrated by an incident which occurred recently. A demonstrator was driving a car with the prospective owner on board when the engine stopped. A hasty examination disclosed the fact that the inlet valve head had sheared from the spindle and had almost found its way into the cylinder, but was carefully fished out in the nick of time. No spare valve being among the parts in the car it became necessary to use the old valve again. The mechanic proceeded to a neighboring blacksmith's shop and there drilled a hole—no easy matter with a brace and bit—through the centre of the valve head. A bolt of considerably less diameter than the spindle was soon deprived of its head and riveted into the valve head. With this improvised spindle the car completed the journey.

SCHRADER UNIVERSAL VALVE.

Trademark Registered April.

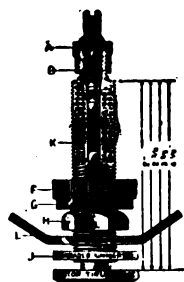
SIMPLE AND ABSOLUTELY AIR TIGHT.

MOTOR TIRE VALVES, as shown in cut, are made in four lengths as shown. Cut is exactly half size of the 2 in. valve

SUPPLIED TO THE TRADE BY ALL TIRE MANUFACTURERS.

MANUFACTURED BY

A. SCHRADER'S SON, Nos. 30-32 Rose Street, New York.



The Week's Patents.

765,060. Storage Battery. Theodore A. Willard, Cleveland, Ohio, assignor to Willard Storage Battery Co., Cleveland, Ohio, a corporation of West Virginia. Filed August 13, 1903. Renewed June 1, 1904. Serial No. 210,678. (No model.)

Claim—1. A sheath, envelop or casing for the purpose stated, having cone shaped perforations, substantially as specified.

2. A sheath, envelope or casing for the purpose stated, having cone shaped perforations whereof the larger openings are on the inside of the sheath, substantially as specified.

765,118. End Gate for Vehicles. Adam Woerber, Denver, Col. Filed March 14, 1904. Serial No. 198,134. (No model.)

Claim—1. The combination with a vehicle body, of an end gate composed of two hinged members, the opposite sides of the vehicle body being provided with tracks or ways adapted to receive the said end gate, one of the hinged members being provided with a stop so located that as the end gate is moved outwardly the stop will engage a part of the body of the vehicle and check the end gate's outward movement when the closing part of the gate is in position to swing downwardly on its hinges.

765,159. Internal Combustion Engine. Baxter M. Aslakson, Oil City, Pa. Filed October 30, 1903. Serial No. 179,170. (No model.)

Claim—1. In an internal-combustion engine, a working cylinder, means for first compressing air slightly outside the working cylinder and thereafter compressing said air highly in said working cylinder, a combustion chamber communicating with the working cylinder, an incandescent body located in

the combustion chamber, a source of gaseous fuel supply, means for compressing said fuel outside the working cylinder to a pressure higher than the maximum pressure of the compressed air, and means for gradually feeding the compressed gas into and through said air and in contact with the incandescent body to thereby cause the gas and air to combine prior to the passage of the gas into the working cylinder.

765,254. Motor Vehicle. Walter W. Robinson, Chicago, Ill., assignor, by mesne assignments, to Friedman Automobile Company, Chicago, Ill., a corporation of Illinois. Original application filed January 10, 1900, Serial No. 930. Divided and this application filed December 7, 1900. Serial No. 38,999. (No model.)

Claim.—In a motor vehicle, the combination with the frame, of a jacketed explosive engine mounted thereupon, a reservoir for the liquid fuel of the engine, located beneath the seat, suitable connections extending from the reservoir to the engine, and provided with valves, part of said connection being flexible; a tank for the jacket water, said tank being supported by the frame in advance of the engine, and having passages extending lengthwise of the vehicle, and having also a passage for the engine shaft, flexible tubes connecting the engine with said tank, and mufflers also supported by the vehicle frame and arranged in the rear of the engine and connected therewith, substantially as described.

765,290. Tire Cover. Martin Korth, Cologne Raderburg, Germany. Filed April 1, 1904. Serial No. 201,191. (No model.)

Claim.—1. The herein described method of manufacturing leather covers for vehicle wheel rims, consisting in cutting a number of plates or pieces of undressed leather, dis-

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.
In capitals, 25 cents per line.

SEND five cents for our illustrated catalogue of second-hand automobiles. Big variety, low figures. MISSISSIPPI VALLEY AUTOMOBILE CO., 3927-3939 Olive St., St. Louis, Mo.

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FOR SALE—1903 Merkel Motor Bicycle completely overhauled and now really better than new. N. Y. B., care MOTOR WORLD.

FOR SALE—1904 Winton; run less than 500 miles; equipped with side and rear baskets; machine in perfect order; \$1,500.
E. S. REYNOLDS, Dayton, Ohio.

FOR SALE—As good as new Waverly Electric Automobile. DR. E. M. OUTLAND, 547 Newton Claypool Bld., Indianapolis, Ind.

WHITE Steam Stanhope; A1 condition. H. G. T. MARTIN, 41 Union Square, N. Y.

FOR SALE—The finest two cylinder car ever built by the Peerless Motor Car Co.; Royal blue, red gears; two extra radiators; nine tires, some never been used; two differentials; three gears and pinions; Jones speedometer; Veederodometer; clock; nine inch Rushmore search light; two Dietz oil, two Solar gas lamps; tail lamp. In the very best of first class condition, and will demonstrate to any one. Price, \$1300 F. O. B. Joplin, Mo. Want four cylinder car. C. E. HART, Lock Box No. 377, Joplin, Mo.

FOR SALE—Indian motorcycle, latest model barely used; never injured; have auto and don't need it; \$150. C. S. WILLIAMS, 328 Second St., Memphis, Tenn.

"THOUGHTFUL MECHANICS"

Positions are open for thoughtful mechanics who can improve details of RAMBLER Automobiles. Only practical men, willing to show their ability before remuneration is determined, are desired. THOMAS B. JEFFERY & COMPANY, KENOSHA, WIS.

Anticipating a large demand from NEW ENGLAND for

"THE CAR OF SATISFACTION"—

THE FORD

we early placed a large order.

RESULT:—We are in position to make deliveries and submit our proposition. If you are interested, write us.

P. A. WILLIAMS, Jr., 147 Columbus Ave., Boston, Mass.

TIRE CASES AND LAMP COVERS.

Tire Covers, Dust Guards, Engine Boots, Leggings, etc
Best goods, lowest prices.

Write for samples and quotations.

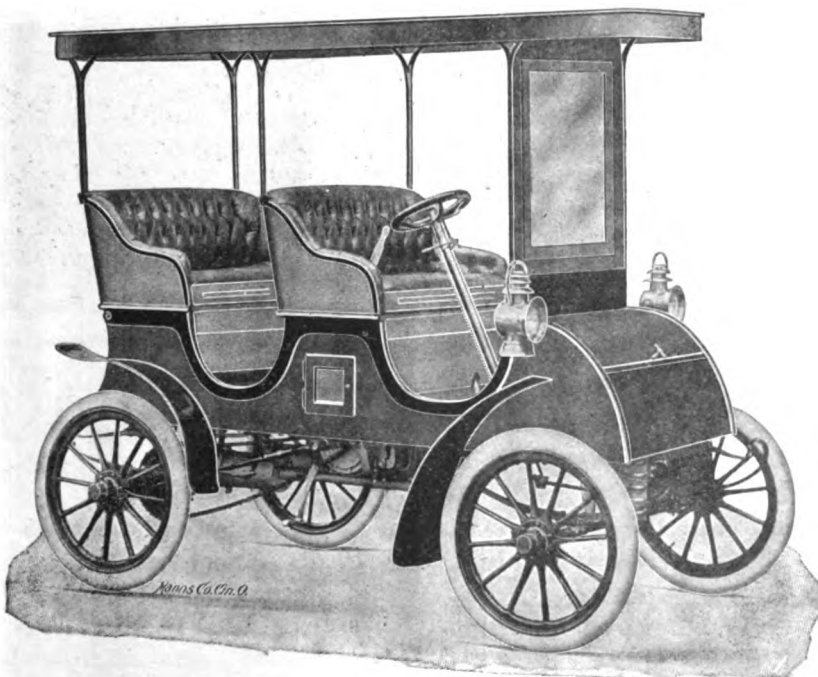
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CRESTMOBILE

\$800 for two persons, and \$900 for four persons
The standard low priced air-cooled car.
THE CREST MFG. COMPANY,
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THE CAR OF SIMPLICITY AND POWER—

The SCHACHT



Two-seated Surrey or Tonneau style with top \$1075. Glass front \$25 extra.
12 horsepower, opposed cylinder engine.

The simplest, strongest and best machine on the market for the money. Write us for catalogue, and we will give you full specifications.

THE SCHACHT MFG. CO., Cincinnati, O. U. S. A.

posing these in a continuous row on an annular shape, superposing thereon a second layer of like pieces with their edges overlapping, uniting the layers and pressing the cover into shape.

765,498. Change Speed Gear. Walter L. Marr, Detroit, Mich. Filed August 3, 1903. Serial No. 167,966. (No model.)

Claim.—The combination of a driving part

having a gear wheel with exterior teeth fixed thereon, a driven part having a gear wheel with exterior teeth fixed thereon, said gear wheels being of different diameters, a member adapted to rotate around the axes of said gear wheels, planetary gear wheels pivoted upon an arbor in said member, and meshing with the gear wheels upon the driving and driven parts, means for limiting the

motion of said member, a second gear wheel upon said driving part, a rack upon the driven part, a member adapted to rotate about the axis of the last mentioned gear wheel on the driving part, a gear wheel pivoted upon an arbor upon the last mentioned rotatable member, means for limiting the motion of said member, and means for limiting the motion of said rack.



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THIS IS THE TIME TO

BUY YOUR SUPPLIES.

**Lamps, Horns, Pumps, Goggles, Plugs,
Batteries, Odometers, Jacks, Coils,
Baskets, Tires, Chains, etc.**

EVERYTHING FOR AUTOMOBILE OWNERS AND DEALERS.

EXCELSIOR SUPPLY CO., - 233-5-7 Randolph Street, Chicago, Ill.



ANY SIZE
OR LENGTH
THREAD.

THIS ILLUSTRATION IS FULL SIZE

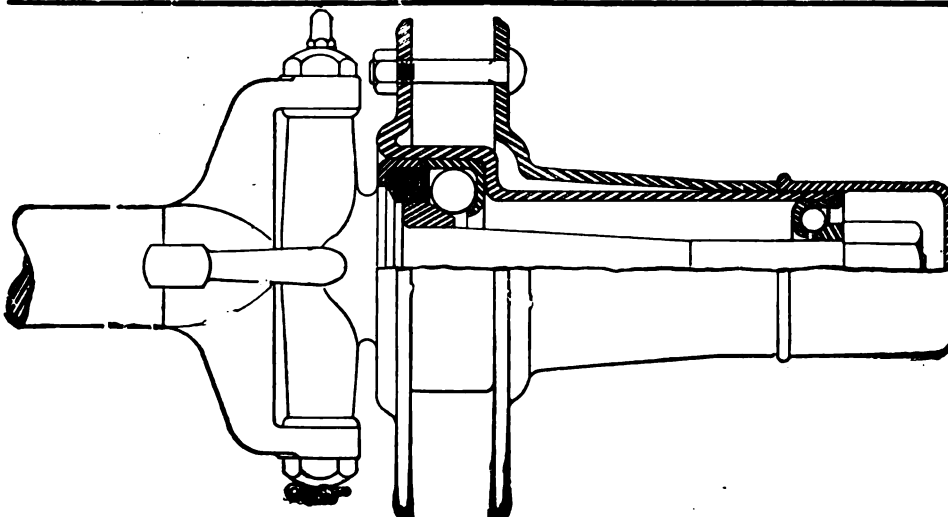
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THE BULLOCK-BERESFORD MFG. CO., CLEVELAND, O.

THE **Bullock** IGNITION SYSTEM DOES AWAY WITH ALL INDUCTION AND SPARK COILS, SOOT AND HIGH VOLTAGE TROUBLES.

THE **Bullock** "SPECIAL" CAN BE OPERATED WITH ANY SIZE ORDINARY DRY BATTERIES—6 BEING AMPLY SUFFICIENT AND EFFECTS GREAT ECONOMY IN CURRENT CONSUMPTION.

WRITE FOR BULLETIN—W.



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Extremely light and strong Hubs with a smooth surface for finish are obtained.

Center line of Spokes is close to Steering Head. Smooth and Easy Steering is obtained.

Races are GROUND IN POSITION.

Cones and Cone Seats on Spindles are GROUND TO GAUGE.

We manufacture for the trade only.

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THE ONLY WAY

to build automobiles that
will stand the test is to
use sheet metal parts in
place of castings.

**WE DO HEAVY AND DIFFICULT
STAMPING.**

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BUFFALO, N. Y.



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MAKING RIMS

(the kind that stay true) is an art.

"SWEDOH" Spring Steel Rims

represent the highest achievement of the art of rim-
making.

They are used by most conscientious automobile
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"Swedoh" Spring Steel Rims

are made by

THE AMERICAN TUBE & STAMPING Co.,

Bridgeport, Conn.



We own and operate our steel billet-
making and hot and cold rolling
mills and stamping works



IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours.
CHICAGO 24 hours.



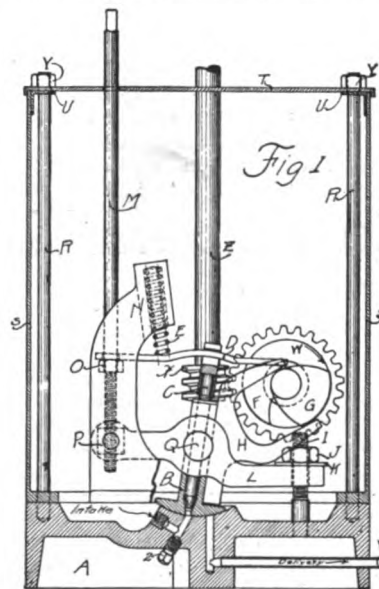
Baltimore 5 days.
New York 4 days.
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**We are supplying the largest
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THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.

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"Makers of Smart Automobile Lamps."

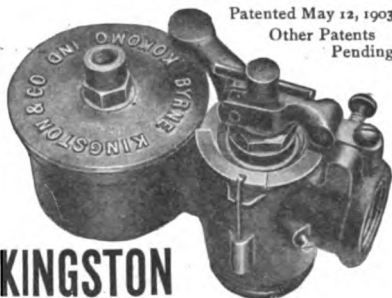
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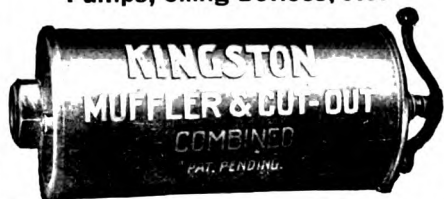
OVER 17000 IN USE.

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Other Patents
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KINGSTON

Carburetors, Mufflers, Spark-Coils,
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An instrument that will enable you to determine the
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The FORC GASOLENE BURNER.

Best and Most Effective Burner Manufactured.

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"STAYS RIGHT THE LONGEST"

Is the most satisfactory ignition plug in the
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Autocar, Thomas, Locomobile, Knox etc., \$1.75
Mica plugs \$2.00- Cadillac size plug \$3.00. New
No. 17 size \$5.00. Best porcelain obtainable used.
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Makers of Front Axles, Rear Axles, Transmission Gears and Special Parts.

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TO FIGURE ON CONTRACTS, LARGE OR SMALL.

Quality and Workmanship of the Highest Standard Only.

PROMPT DELIVERIES GUARANTEED.

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STANDARD AUTOMOBILE PARTS

Pressed steel frames, pressed steel hubs, malleable hubs, brakes, steering gear,
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The Car You Ought to Have at the Price You Ought to Pay.

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NOT AN EXPERIMENT.

Why use a tire that causes you trouble, when one can be obtained that has passed the experimental stage and has given universal satisfaction to all users.

All roads are alike when a machine is fitted with Tennant Tires.

Send for catalog that tells all about it.

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WHEEL SMASH-UPS

are lessened if you use P. & B. Tubular Steel Artillery Wheels. Should anything go wrong you're at no expense as a five years guarantee covers everything. Our "Wheel Wisdom Talk" tells you all about it.

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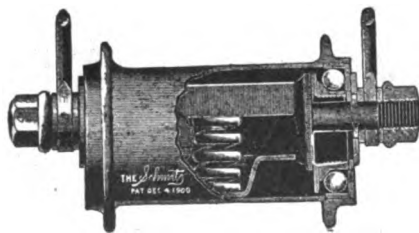
Accuracy in Reboring Cylinders.

It is a fairly simple operation to bore an engine cylinder which is open at both ends, by fixing it down to the saddle of the lathe, which must be a good lathe and free from chatter in every part. The holding-down bolts must not strain the cylinder bore out of circular form during the operation of boring with a cutter bar between lathe centres, and the final cut must be a mere scrape with a flat-nosed tool.

Repairmen are well advised not to undertake reboring cylinders unless they are prepared to work with great accuracy. A bore which is accurate enough for a steam engine might be useless for an internal combustion engine, and it is very difficult to eliminate all tendency to chatter when boring out a cylinder which has to be fixed to the face plate, because it is open at one end only, especially when it presents a rounded top to the face plate. However, to enable such a cylinder to be bolted to the face plate, its head may be cast in a lead mould, first clay-ing up all entrances to the head, then in-verting the cylinder into a square tin box just large enough to receive it to about half its depth. Fill the tin box around the cyl-inder head with molten lead, allow it to cool, and then strip off the box, which leaves the lead mould like a loaf of bread with a flat bottom to suit the face plate to which it may be bolted, and then carefully and accu-rately bored as described.

Seven members of the Spring family, of Newton, Boston's noted suburb, are owners and drivers of automobiles. John Spring was the first to become a motorist, and he, at various times, initiated six members of his family into the delights of automobiling.

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For BICYCLES, MOTOR CYCLES, AUTOMOBILES
Holds several World's Records for speed. Relieves and breaks jar below the axle, thereby saving at least half the wear on tire. Absolutely guaranteed.

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Better Not..

have any ignition outfit than to have a poor one.

WE MANUFACTURE NOTHING BUT THE BEST.

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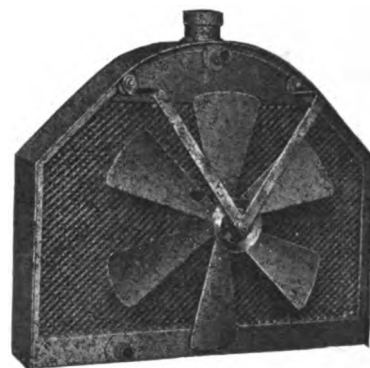
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For 1905.



The success of the WHITLOCK COOLER has been so completely demon-strated and this device is now so widely used and so well known that a description of it here would be superfluous.

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No radical changes from the already popular and successful type have been attempted, but we have confined our efforts to perfecting minor details of construc-tion, to a careful study of the features which promote high efficiency and great durability in operation, to the improve-ment of processes of manufacture, and to the increasing of our facilities.

We are now receiving orders for early fall delivery.

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HARTFORD, - CONNECTICUT

Protection for Man and His Motor

RAIN APRONS, ENGINE CASE,
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For information about opportunities now available, prices of
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Automobile Chains,
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DIXON'S GRAPHITE CUP GREASES.

Most excellent and most satisfactory
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Our leathers are used by most
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Ask us why.

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MILLER OIL GUN.

This oil gun or syringe should be part of the equipment of
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Total length 13 1/2 in. Guaranteed.

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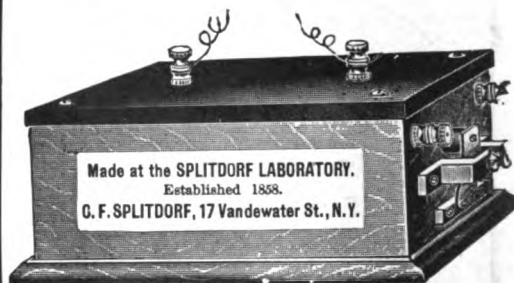
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HIGH-GRADE LAMPS

Acetylene Gas and Oil
ATWOOD MFG. CO.,
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"Jack, what is C H & D, a new breakfast food?"
"No, it's a Railroad from Cincinnati to Chicago." Speaking of food,
I got the best meal on their cars I ever had on a railroad."

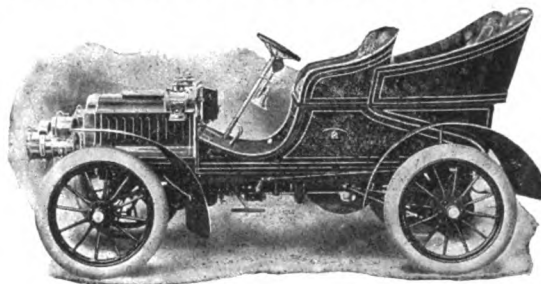
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The progress of the Oldsmobile abroad has been a continual triumph. It has led the advance of automobiles into remote corners of the earth. Everywhere it is recognized as the world's standard runabout—*the best thing on wheels.*

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Oldsmobile
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The Oldsmobile Curved Front Runabout is the most thoroughly tested automobile in the world. Built upon the solid foundation of Oldsmobile experience the Oldsmobile Light Tonneau Car possesses style, quality and efficiency to an unequalled degree. It is in no sense an experiment. It is built to run and does it. It has plenty of speed and no end of endurance. It is built without gaskets. Cylinder and cylinder-heads are cast integral. Main bearings are self-oiling. The hub-brakes are controlled by foot-lever. There are numerous other distinct features.

Our immense factory facilities—nearly one million square feet of floor space—insures prompt delivery.

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Member of the Association of Licensed Automobile Manufacturers.

HONOR WELL PLACED.

The strength of the Tennant Tire as a whole is
in the harmony of the parts.



They have an excellence that is all their own and insure
a season of tire satisfaction. The only puncture-proof tire that
has proved worthy of the title.

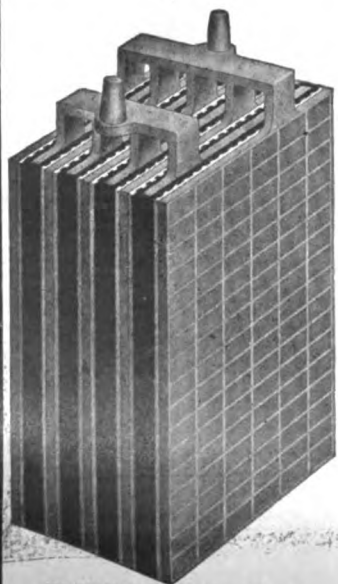
**NO PINCHING OF THE INNER TUBE. RIM CUTTING IMPOSSIBLE
ABSOLUTELY PERFECT IN EVERY DETAIL.**

If such a tire appeals to you, a letter will bring
Catalogue and full information.

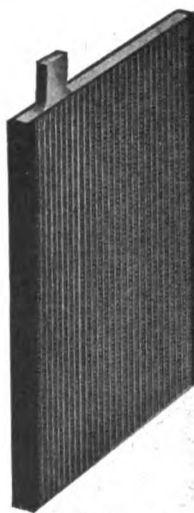
TENNANT AUTO. TIRE COMPANY,
144 West Main Street, Springfield Ohio.

THE WILLARD

**LATEST
MODEL**
Light Weight



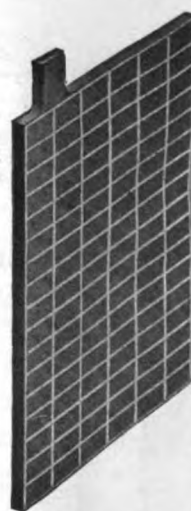
ELEMENT COMPLETE.



SHEATH OVER
POSITIVE PLATE.



WOOD SEPARATOR.



STORAGE BATTERY

MANUFACTURED BY
THE WILLARD STORAGE BATTERY CO. CLEVELAND, OHIO.

THE CADILLAC IS ALL GOLD!



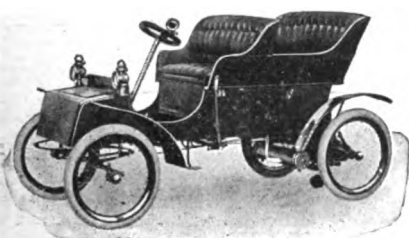
With the least power and the lowest cost the REGULAR STOCK CADILLAC

driven by Mr. Lamont carried four people with their heavy photographic outfits through the severe two days White Mountains Endurance Test without ever a hitch and

WON THE GOLD MEDAL.

If you want to be among the winners drive a CADILLAC.

THE CADILLAC AUTOMOBILE CO., Detroit, Mich.



Tonneau Car, price \$525.

IF YOU KNEW



Runabout, price \$475.

how useful one of these little machines would be to you, and how much pleasure can be derived from them, your order and check would be on the way to us before another sun has set. The following is what one purchaser says; we have received hundreds of similar letters:

WALTHAM MFG. CO., Waltham, Mass.

Gentlemen: I do not wish to take up your valuable time, but I do wish to let you know what I think of the Orient Surrey I purchased of you some four weeks ago. I went to Chicago a week ago and carried four persons, and it is a good distance of over one hundred miles. I made the trip, in and out, in extra good time, and did not have one bit of trouble either way. It is the easiest riding machine that I ever rode in, and as for power will say that I think it has more than you claim for it, as it will climb any kind of a hill, and it is very seldom that I have to use the slow-speed gear.

I would have written you some time ago, but I wished to give it a thorough trial, and now I have done so on hill, in sand, and in mud, and am pleased to say that I have never found it wanting in any particular.

Wishing you success, I am,

Yours respectfully,

N. H. RANDALL.

Write for catalogue.



Surrey, price \$450.

WALTHAM MFG. CO.,

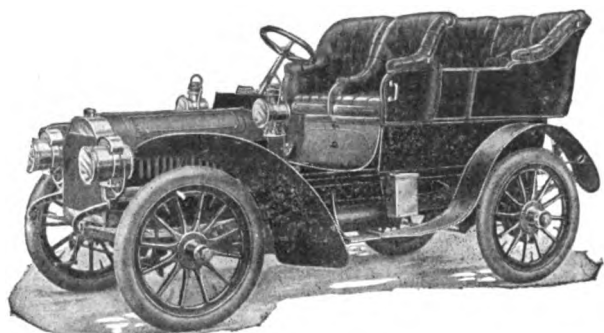
WALTHAM, MASS.



Buckboard, price \$425.

Peerless

THE CAR
OF
ACHIEVEMENT



BRILLIANT VICTORY OVER FOREIGN MACHINES AT NEWPORT RACE MEET, JULY 30th.

A summary of the fifth race—open to gasoline cars not exceeding 24 horse power—is as follows:

First heat.

PEERLESS, 24 H. P., first.
Mercedes, 20 H. P., Second.
Mercedes, 18-22 H. P., Third.

Second heat.

Panhard, 24 H. P., first.

Final heat.

PEERLESS, 24 H. P., first.
Panhard, 24 H. P., second.

The numerous victories of this kind achieved by the Peerless demonstrate not only that our engine is very powerful, but also that, by our unique system of direct drive, all of the power is delivered to the rear wheels.

PEERLESS MOTOR CAR CO.
CLEVELAND, OHIO

Member Association Licensed Automobile Manufacturers.

THE TRIUMPH OF THE ELMORE PATHFINDER



OVER 1000 MILES OF ROADS OF ALL SORTS IN ALL
KINDS OF WEATHER AND A REPAIR BILL OF 25 CENTS.

Did any car of any size ever equal this record? This car made a mapping and routing tour from New York to St. Louis during weather conditions that delayed traffic, and its business was to investigate every road, find the bad places. A severer road test could not be made.

The lesson to be learned from this trip is that a small car costing \$850 that can accomplish these things is worth further investigation. Let us send you our book, "One Long Jump and Two Short Steps," and our new catalogue.

THE ELMORE MFG. COMPANY,

1104 AMANDA ST., CLYDE, OHIO.

Members of the Association of Licensed Automobile Manufacturers.

TAKE A KNOX WATERLESS CAR TO THE MOUNTAINS

and climb right up without let or hindrance. Knox does the trick. No overheating of engine—no water troubles—no worry—simply luxury in mountain touring.

BEST BY ROAD TEST.

Get Catalogue.

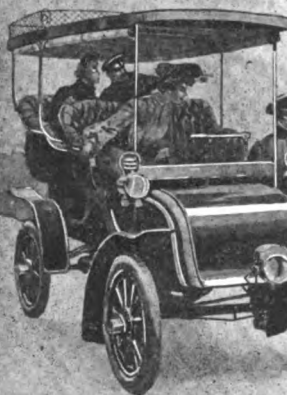
6 Styles Passenger.

6 Styles Commercial Cars.

Knox Automobile Co.,
Springfield, Mass.

Members Ass'n Licensed
Automobile Manufacturers.

Selling Agencies in
all Principal Cities.



HAND BOOK OF GASOLINE AUTOMOBILES ISSUED FOR THE INFORMATION OF THE PUBLIC WHO ARE INTERESTED IN THEIR MANUFACTURE, SALE AND USE.

This handsomely bound and artistically printed book now in the hands of the printers will contain about 88 pages and will illustrate about 80 gasoline cars, one car and its specifications to each page. It is issued primarily for convenience and information to the prospective purchaser of an automobile. The products of the principal manufacturers throughout the United States of America and the Importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto in red ink. The questions being uniform, the ease of comparison is obvious and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste, or the means at his command.

Sent upon receipt of 6 cents in stamps for postage.

ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS,
Room 1009—No. 7 East 42nd Street, New York.



DEPENDABLENESS.

The Morgan & Wright Clincher has that quality of dependableness one finds in a good honest man.

IT'S PUT THERE IN THE MAKING OF THE TIRE.



MORGAN & WRIGHT, CHICAGO

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Dayton

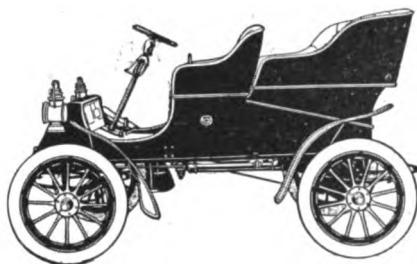
Detroit

St. Louis

San Francisco

Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

THE FORD



is an automobile with a reputation. We have proven our ability to make and sell for \$500 a car equal to any machine costing less than \$2,000.

What is more, THE FORD has stood the test of time and hard usage. The double opposed motor is the same type of engine used in the most expensive touring cars.

FOR THE PHYSICIAN and Business Man the reliability of the Ford is its strongest recommendation.

Its simple construction enables any member of the family to easily master the mechanism and to readily learn to operate it.

Write for catalogue and full particulars to

FORD MOTOR CO., Detroit, Mich.

"BETTER

Than the \$8000 French Car"

is one pleased purchaser's opinion of the

Thomas 3-cylinder Touring Car,

which costs several thousands less.

There is every reason why this should be so. Even if price is not an object, wisdom and self-satisfaction ought to dictate inquiry into the merits of the car that should beget such opinions. Are you familiar with them?

E. R. THOMAS MOTOR CO., Buffalo, N. Y.

Member of the Association of Licensed Automobile Manufacturers.



RIM LIFE

means

TIRE LIFE.

"SWEDOH" Spring Steel Rims are long-lived.

Their use insures long-life to the tires to which they are fitted.

The composition of "SWEDOH" SPRING STEEL is peculiarly adapted to automobile rim building. There's just the right proportion of toughness to keep the rims round and just enough spring to soften the shocks to which a rim is subjected.

"SWEDOH" SPRING STEEL RIMS are now used by most builders of high-class cars, and are heartily indorsed by all tire manufacturers.

Made by

THE AMERICAN TUBE & STAMPING CO.,

Bridgeport, Conn.

We own and operate our steel billet-making and hot and cold rolling mill's and stamping works.

**Now is
the Time**

to submit your

SPECIFICATIONS

for

FORGINGS

to insure

prompt deliveries.

We are ready.

Don't delay.

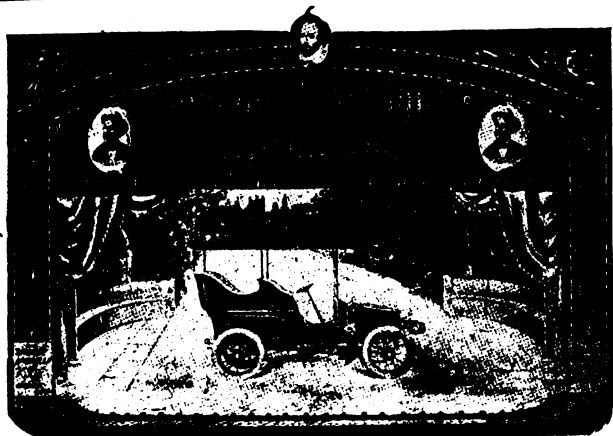


THE BILLINGS & SPENCER COMPANY, Hartford, Conn.

Makers of

Drop Forgings of every Description.

Sprague's Patent Canopies
With Roller Celluloid or Glass Front.
PRICE, \$100.



We also make a line of fine canopies, natural veneer tops, elegant in finish. Write for prices.

Aluminum Bodies

of the
HIGHEST GRADE.

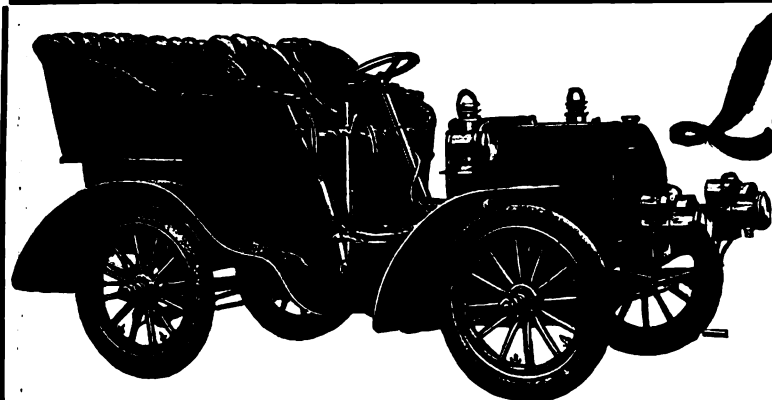
TOPS, FENDERS and HOODS.

Painting, Repairing
and Remodeling.

**Chassis Lengthened and Side Door
Entrances a Specialty.**

MOORE & MUNGER CO., 602 West 52nd St., New York City.

TELEPHONE, 4425 Columbus.



Type C. \$2100 complete.

Locomobile GASOLENE TOURING CAR.

HAVE YOU BEEN DISAPPOINTED IN GETTING DELIVERY OF SOME OTHER MAKE?

If so, Communicate with us.

"EASILY THE BEST BUILT CAR IN AMERICA."

PRICES, \$2100 upwards.

The Locomobile Company of America, Bridgeport, Conn.

BRANCHES
NEW YORK, 76th St. and Broadway. CHICAGO, 1854 Michigan Ave.
PHILADELPHIA, 249 North Broad St. BOSTON, 15 Berkeley St.
Member Association of Licensed Automobile Manufacturers.



Hotel Lenox

Boylston and Exeter Streets
Back Bay, BOSTON

ONE OF THE FINEST MODERN
FIRE PROOF HOTELS IN THE
COUNTRY. TWO MINUTES'
WALK FROM THE BACK BAY
STATIONS, AND ONE BLOCK
FROM COPLEY SQUARE

CHARLES A. GLEASON, Manager
Send for illustrated booklet

Why?

A great many people enquire why the Darracq Motor Cars are so popular and why so many more of these cars are sold than any other foreign make.

The answer is

Because they are Reliable and sold at the right commercial price.

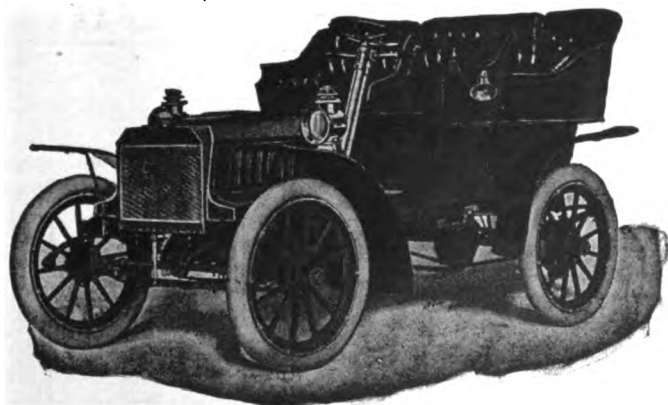
F. A. LA ROCHE CO.,

Sole American Agents,

655-654 Hudson St.,

147 West 38th St.,

New York.



FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — \$1,700 at the factory.

Two cylinder, horizontal, opposed motor in front.

Ball bearing transmission gear.

Wheel or lever steerer.

Divided front seat.

Automatic oiling of engine and other parts.

Gear drive.

Every part instantly accessible.

THE AUTOCAR COMPANY,

Ardmore, Pa.

BOOKLET.

Member of the Association of Licensed Automobile Manufacturers.

Extract from the MOTOR AGE of June 11th, 1904:

"Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class."

This was a stock

Rambler

the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue "W" fully describes all models, and our booklet "A Little History" gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

THOMAS B. JEFFERY & COMPANY,

KENOSHA, WISCONSIN.

BRANCHHOUSES: { **Chicago, 302-304 Wabash Avenue.**
Boston, 145 Columbus Avenue.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, August 11, 1904.

No. 20

SEPARATE SHOW OF IMPORTS

Foreign Car Dealers Organize to Hold an Exhibition of Their Own Next Winter.

Two shows will be held in New York again next winter, but under different circumstances from those under which there were two exhibitions last January.

The second show will be one made up exclusively of imported cars and accessories, and will not be a rival of the national show, but rather an annex to it, run under an official sanction and contemporaneously with the main show in Madison Square Garden.

The show of foreign cars will be held in the Herald Square Exhibition Hall, where the so-called "overflow show" was held last winter while the national affair was running at Madison Square Garden. It will be conducted by the representative importers, who have organized for this specific purpose.

This was the meaning of the incorporation notice which appeared last week in the daily papers, stating that the Importers' Automobile Company had been incorporated under New York laws, with a capital of \$4,000. The incorporators named were E. T. Birdsall, C. R. Mabley and E. B. Gallaher, all importers, of New York City.

This arrangement by the importers is apt to be satisfactory all around, especially to the domestic manufacturers, as it was thoroughly recognized last January that the foreign cars took up a lot of room that home manufacturers would have liked to have had could they have bought it.

At present the members of the new association have little to say concerning their show, but it is understood that it will be handled stylishly and be quite an elaborate affair.

Allen Goes to Europe.

Walter Allen, of Allen, Halle & Co., importers of this city, sailed for Europe on Saturday last. He will, while abroad, familiarize himself with the Mercedes situation, as his firm imports that well known car.

Washington Employee an Embezzler.

Herman K. Haupt, who was superintendent of the Washington (D. C.) Electric Vehicle & Transportation Co., was arrested last week and taken to police headquarters there upon a warrant alleging the embezzlement of \$38.86. The police were told that his alleged defalcation will amount to between \$3,000 and \$4,000. Haupt is thirty-three years old, and is well known about Washington. He has been in the company's employ about five years. His alleged failure to appear in his office some days ago resulted in an investigation of the company's accounts, and Louis Ruprecht, manager of the company's business, swore out the warrant.

Detectives Parham and O'Brien were given the writ to serve, and they found Haupt in a restaurant near the Baltimore and Ohio depot. When the officers placed him under arrest his only comment was, "Well, they've taken action." He said he did not desire to say anything about the charge at this time.

Auto Capitalists Seek Factory Site.

Four men, described as "prominent Eastern capitalists," and named B. Forsinger, of Albany, N. Y.; Rudolph Duffy, of Philadelphia, and Andrew Peck and Willis Barth, of New York City, arrived in Grand Rapids, Mich., one day last week to inspect the city and its industries with a view of possibly locating a large automobile plant in that city. They are said to be at present interested in an automobile plant in New York, and desire to establish a branch factory in the West to care for the extreme Western and Southwestern sales.

A number of other places are under consideration. No local aid will be solicited, it is added.

Olds Buys Detroit Car Barns.

After having occupied them for about a year, the Olds Motor Works has purchased from the Detroit United Railway the big car barns on Jefferson avenue, Detroit, Mich. Until now they were merely leased, but they were fitted up with machinery and formed an important part of the Olds Co.'s Detroit plant. The consideration for the property is understood to have been in the neighborhood of \$150,000.

LA ROCHE COMPLETES RUN

Makes a Non-Stop-of-the-Motor Record of 3,400 Miles in Fifteen Days.

Not only the longest, but far and away the most meritorious, automobile run, with a continuous performance by the motor, was completed on Tuesday of this week by F. A. La Roche, of New York, in a 15-20 Darracq touring car. Taking the roads as they came, through rain and mud and over mountains, Mr. La Roche finished his trip from New York to St. Louis and back, covering a total distance of about thirty-four hundred miles without having the engine of the car stop once. It was not the distance, however, that was the most remarkable part of the feat. It was the rough travel encountered and the time taken for it. Two days were spent at St. Louis, and long stops were made at various other places, and the trip was a leisurely one, so that the total time during which the engine was kept running was fifteen days and two hours over.

Mr. La Roche completed his big run in front of the Automobile Club of America, at Fifty-eighth street and Fifth avenue, at 11:44 a. m. on Tuesday. He arrived at the club a few minutes before that time, and waited until just that time to stop the motor, he having set forth from the same place at just 9:44 o'clock on July 25, getting away with the other tourists in the trip to St. Louis under the auspices of the American Automobile Association. When Mr. La Roche finished in front of the club on Tuesday his car still had on each side of it the white cloth signs furnished to the tourists, he having made a regular entry for the trip. The tourists had not, however, reached St. Louis when La Roche had completed his round trip. Having stopped his motor, Mr. La Roche went into the club and registered.

Mr. La Roche looked well, though fatigued at the finish. In jocular fashion he was asked if his engine was now ready for the scrap heap, and he answered:

"Not a bit of it. It is ready to start off for another five thousand miles. All I would ask

(Continued on page 726.)

DAVIS AND HIS BIG SIX

Optimistic Providence Dealer Talks of Season's Trade and His Splendid Lines.

A chat with Colonel Nelson Davis, of the Davis Automobile Co., Providence, R. I., is always interesting, more often exhilarating. For the "colonel" is the kind of warrior who brooks no opposition, carries everything by storm, and would be just as enthusiastic and convincing on top of an ash barrel selling patent nostrums as he would be in command of an army, or as he is in his two prosperous looking automobile stores.

Like so many other successful automobile dealers, he is a graduate of the bicycle business—past master in the bicycle business would be more exact, for a row of famous Racycle bicycles still holds the place of honor in the windows of the big garage, and he still sells a surprising number of them each year. But it is the larger machines and the newer business that take up the major portion of his time.

"How's business?" he echoed. "Well, just look around and see for yourself. But then," he went on, half-apologetically, "you see we have the best six machines in the country in the Winton, Knox, Columbia, Haynes-Apperson, Locomobile and Olds.

"Sold thirty-nine Wintons so far," he added, and when in a jocular way it was intimated that he must have been making "price inducements," the vigor of his denials fired the old warrior, and he launched into a eulogy of the Winton machine that would have done credit to the Winton sales department itself.

"Cut prices on the Winton! Not one cent, and the people who buy Winton cars are glad to pay freight or expressage in addition to the full price. Yes, sir," he continued, "everybody knows that New England is the home of the finest mechanical experts in the country, and they're just wise enough to know exactly what they want in the way of an automobile. They want a machine built for American roads and conditions—one that will take them anywhere they want to go without breaking down, and that they can handle themselves; these people care nothing about what they're doing on the smooth roads of Europe or for machines that go a hundred miles a minute; they want their own private car, independent of the N. Y., N. H. & H. R. R., so that if all the trains are taken off, instead of about three-quarters, as they're now doing (a sly poke at the railroad company), they can still get to New York or Boston or wherever they want to go. That's why they buy Wintons, and after they have 'em a while their friends buy 'em, too.

"Why," warming up, "any number of those Winton cars have run between six and seven thousand miles and never been near the shop. I did have just one come back—a fel-

low flooded her with oil; but that wasn't the car's fault, and that's the sum total of my trouble with thirty-nine Wintons.

"Sold a four-cylinder 'Quad' yesterday," Colonel Davis proudly remembered, "and the man was perfectly willing to pay \$55 expressage on it.

"This is a Winton country all right," he wound up, "and it's going to stay so."

But Colonel Davis is versatile, and can wax just as interested whenever any of his other lines are mentioned.

"Knox? Sold eighty of 'em," and, getting confidential, he lowered his voice in imparting the information that the Knox was about the smoothest proposition of its class on the market. "Giving too good satisfaction for the health of my repair shop," he sighed. "Columbia and Locomobile? Yes, sell as many of 'em as I can get—quite a few sports 'round this neighborhood," he added in explanation. "Haynes-Apperson? It's getting just plain 'Haynes' now. I see they're dropping the tail to the name and making it like the car, just as simple as possible. Well, sir, when a man makes up his mind to buy a Haynes, you can't sell him anything else, that's sure, and the kind of men that buy them are the ones who have been studying up a good deal. Like to sell 'em that car, too," and he let his eyes wander affectionately to where the sturdy Kokomo car stood, "because I know they'll be hollering Haynes the rest of their lives.

"Olds? Guess you know about Olds this year. The car had 'em all skinned in its class. Buyers were around here thicker'n fleas, and about as pesky, but I couldn't get the goods. Just wait until I catch hold of those sales agent fellows though; there's something coming to them, and it won't be Ann Arbor medals either," meaningly concluded the colonel, in a convincing tone.

All of which will give some idea of Colonel Nelson Davis, Providence, R. I.—a man who successfully sells six different cars.

Good Men in Demand.

From the number of inquiries being made by manufacturers, it is evident that there will be many positions open from now on for good men. There is a demand for both travelling and office men, but not for any of the mediocre class. In fact, it is foreshadowed that quite a few who have not come up to the standards required will be released.

Many of the inquiries from manufacturers in search of help are received at the offices of the Association of Licensed Automobile Manufacturers. As quite a number of men looking for places also tell their wants there, a number of men have been helped to positions, considerably to the annoyance of General Manager George H. Day, who does not like the idea of the headquarters being turned into an employment bureau, although he finds it impossible to avoid bringing the wanderer and the wanted together when they are suitable.

NEW YORK DEALERS AT WORK

Association Preparing for Uniformity of Storage and Other Contracts.

At its Wednesday night meeting, last week, the New York Automobile Association showed that its revivication is real and likely to last. Not only that, but also that it will grow. Three new members were added to the rolls—the Automobile Import Co., Peter Fogarty and Theodore H. Schulz.

The meeting was held after a dinner at Reisenweber's, corner of Fifty-seventh street and Eighth avenue, at which twenty-eight persons were present.

The main business topic discussed was the form of a contract for storing cars that would be so efficient and comprehensive that it could be adopted by all, and thus another step made toward a uniformity of methods. The fire insurance clause, releasing the garage keeper from responsibility for damage to stored vehicles in case of fire, was the one most in point, and copies of the contract forms used by them were submitted by several members. Another point in relation to these contracts that was discussed was how to release the garage keeper from responsibility for damage done to a car on the street after it has left the garage and is on the way to the owner's house, even though an employe of the garage is in charge of the car. It was thought that owners, when they order a car delivered to their houses by garage employes, should assume the risk of accident on the highway, the same as if the garage employe was their own. A committee, composed of C. Andrade, W. J. P. Moore and E. T. Birdsall, was appointed to draw up a form of contract covering these and other features. Later, the motion was amended so as to include in the matters covered by the committee the drafting of a contract for the consignment and sale of second hand cars, such as will protect the dealer from the piracy of curbstone brokers, who jump the agent and sell the consigned car direct from the owner to a customer of their own, even after taking the customer to the agent's store to see the car.

A resolution condemning the action of the ferry companies in refusing to transport automobiles was adopted, and a committee appointed to investigate the matter and offer the co-operation of the dealers to the Automobile Club. A committee was appointed to draw up resolutions condemning reckless driving in the city, in order that the attitude of the retailers on this subject might be made clear.

Ollier Now With Olds.

Joseph F. Ollier, formerly manager of the Cadillac Co., of Illinois, has been added to the Oldsmobile travelling staff. He will cover the Western country, with which he is well acquainted.

NO RELIEF AT FERRIES

A. C. A. Committee Fails to Effect a Change at Washington—A Test Case Coming.

Although the Automobile Club of America has not been idle—has, in fact, done its best in the short time allowed—there is as yet no relief in sight for the absurd situation regarding automobiles and the ferries that run between New York City and Long Island and between New York and New Jersey. In one respect, perhaps, the situation may be said to be worse this week than it was last, for one hope for relief has failed.

After the meeting of the governors of the Automobile Club last week, no time was lost in communicating with Secretary Metcalf of the Department of Commerce and Labor, asking for a hearing. Secretary Metcalf was prompt to reply, and an appointment with him was made for Monday of this week. Jefferson Seligman and W. W. Niles, the special committee of the club, went to Washington to see him, and present their plea for a new interpretation of the law under which ferries might permit motor vehicles to run aboard passenger boats under their own power.

Secretary Metcalf practically decided that he could do nothing in the matter. He did not give a positive answer, saying that he wished to investigate further, but he gave no hope of relief, and feared that he would be unable to do so.

There seems yet to be some doubt about the jurisdiction of the subject, and the question has been raised if Secretary of the Treasury Shaw, instead of Secretary Metcalf, has not control of the matter. However, he probably will not be troubled so long as Secretary Metcalf has the matter under advisement.

The line of action now will be to make a test case and fight the matter out in the courts. In this effort the automobilists will have the passive co-operation of the ferry companies, who are as anxious as the automobilists to have the obnoxious and absurd regulation crushed. The ferry companies want the revenue derived from carrying motor vehicles, and want it without the drawback to which it is now subject, for at some of the New York and New Jersey ferries there are several men employed whose chief work is to push motor vehicles on and off of ferryboats.

If the fight in the courts is unsuccessful, appeal will be made to Secretary Shaw of the Treasury Department, for a new reading of the law, and finally to Congress for a new law. The law originally was a Treasury Department regulation, before the Department of Commerce and Labor was created.

The law states that "no naphtha, benzine, benzole, coal oil, crude or refined petroleum or other explosive burning fluids shall be car-

ried as freight or used as stores on any steamer carrying passengers."

It adds, however, that "nothing in the foregoing or following sections of this act shall prohibit the transportation by steam vessels of gasoline or any of the products of petroleum when carried by motor vehicles (commonly known as automobiles), using the same as a source of motive power, provided, however, that all fire, if any, in such vehicles or automobiles be extinguished before entering the said vessel, and that the same be not relighted until after said vehicle shall have left the same; provided, further, that any owner, master, agent or other person having charge of passenger steam vessels, shall have the right to refuse to transport automobile vehicles the tanks of which contain gasoline, naphtha, or other dangerous burning fluids."

It will be seen that even if Secretary Metcalf should make a ruling in favor of the automobilists, the last sentence of the law still gives the ferry companies power to arbitrarily exclude the machines. This, however, it is said, would not affect the matter, since it is known the ferry companies are willing and anxious to carry automobiles.

Mr. Seligman, in speaking of the matter, said: "Of course, we were disappointed to find that Secretary Metcalf can take no action, but under the circumstances it will probably be best to bring about a test case and fight the matter out in the courts at New York."

In the mean time the motorcyclists have been busy and have succeeded in having the ban lifted from the two-wheeled type of motor vehicle, so that they will be carried if their gasoline tanks are empty, while automobiles are not. This was accomplished because motorcycles always had been trundled aboard and from ferryboats by hand.

Rival Show Association Organized.

One of Boston's factions in the war to obtain control of that city's automobile show has gone ahead and organized with seventeen members, under the name of the Boston Automobile Trade Association, and elected officers as follows: President, W. W. Burk; secretary, A. T. Fuller; treasurer, A. P. Underhill. These three, with W. E. Eldridge and A. R. Bangs, constitute the board of directors.

A committee has been appointed, composed of W. E. Eldridge, Benjamin Smith and A. P. Underhill, to make application for a sanction for the holding of a show. Application has been made to the N. A. A. M. for the week following the New York Show, or as soon after as possible.

In the meantime the rival organization, the Boston Automobile Dealers' Association, is "standing pat." It has the lease of Mechanics' Hall, which, as stated last week, was turned over to it by the Boston Automobile Show Association, and it merely awaits the granting of a sanction by the N. A. A. M. to hold its show in March. Both sides are bringing pressure to bear on the latter body and each hopes to obtain its sanction.

SANDUSKY CREDITORS ACT

Petition Filed Against Ohio Makers Declaring Them Insolvent—Action not Unexpected.

An action was begun at Toledo, Ohio, on Thursday last by creditors of the Sandusky Automobile Co., of Sandusky, Ohio, who seek to have the concern declared insolvent. The petitioning creditors are the Diamond Rubber Company, Akron, Ohio; the R. E. Hardy Company, Detroit, and the Sandusky Plumbing and Boiler Company, of Sandusky.

The Sandusky company marketed a gasoline runabout under the name of the Courier. Its troubles will occasion no surprise in well informed circles, as it has been known for some little time that it was not favorably situated financially, and during the past few weeks efforts have been made to secure needed additional capital.

Customer Attaches De Dietrich.

An attachment for \$12,000 against De Dietrich & Co., a corporation of France, in favor of Henry I. Ottman, of this city, was received at the sheriff's office on Tuesday. Ottman seeks to recover the above amount, which he claims to have paid on March 5 for a 40-horsepower car, to be delivered not later than May 31, which he has not yet received. He paid \$6,250 cash and returned another motor car at a valuation of \$5,750.

The Sheriff served the attachment on the American Express Company, which is believed to have a car belonging to the company in transit, and also at the company's office, at 1½ West Thirty-fourth street.

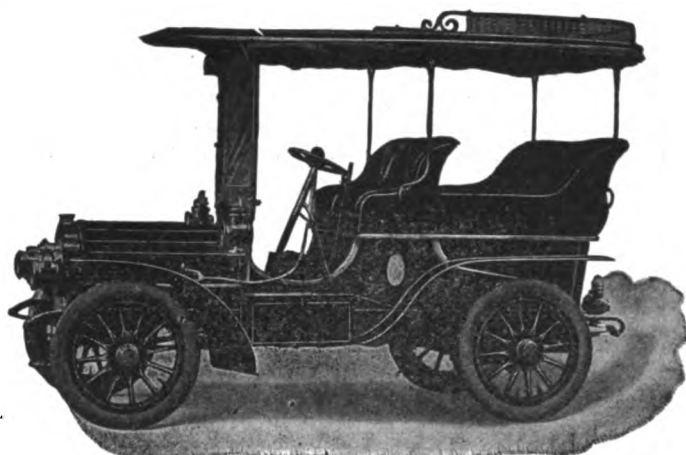
The Week's Incorporations.

Columbus, Ohio.—The Columbus Automobile Engine Co., under Ohio laws, with \$100,000 capital. Incorporators: F. M. Lechner, F. E. Stevens, Harvey Cockell, A. D. Sanderson, F. E. Main, E. G. Savage, S. B. Nace, E. B. Evans, M. A. Corbett, M. H. Neil, Albert Ross and W. E. Moling.

Detroit, Mich.—The Detroit Automobile Mfg. Co., under Michigan laws, with \$2,000 capital, of which \$700 is paid in. Incorporators: Eugene G. Charbonneau, of Newark, N. J.; Joseph P. Lavigne, James H. Howick, Engelbert Venderbush, William J. Looman, John A. Fisher and John A. Preston, all of Detroit.

Shanks Talks About Racing.

C. B. Shanks, of the Winton Motor Carriage Co., of Cleveland, was in New York last Monday visiting the branch house on Broadway, and also attending to other affairs. He said that the Winton concern appreciates the importance of keeping in touch with the racing game, but at present is taking a breathing spell. The Bullet No. 2, that is now in charge of Earl Kiser, will be raced against Oldfield if that worthy enters for the races at Cleveland, Mr. Shanks said, but it is doubtful if Kiser enters for any races outside of Cleveland.



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Tonneau

TWO MODELS

1904 Light
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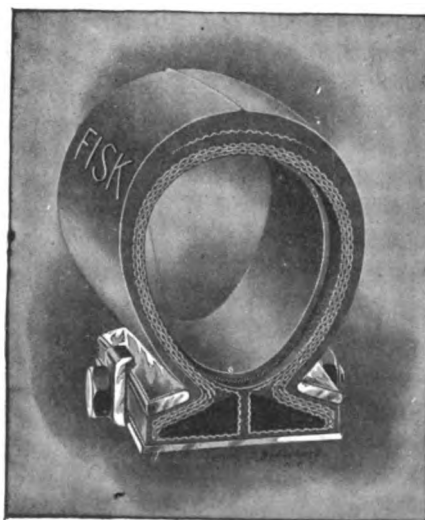
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OMAHA,
MINNEAPOLIS,
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LOS ANGELES,

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CHICOPEE FALLS, MASS.



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NEW YORK, AUGUST 11, 1904.

A Retrospect and a Forecast.

August is a month of inventory and vacations in the automobile industry. September will find the plans of the mechanical departments of the various factories which have been at work since the automobile shows ready for inspection and testing for the 1905 trade.

A careful canvass of the situation in the industry will show, as in previous years, that the output of motor vehicles for 1904 will fall far short of the number estimated. While the year found the majority of the trade very late in deliveries, the fact that with few exceptions deliveries were not commenced until May, 1904, was the means of curtailing the output of quite a number of factories.

However, the matter of late deliveries in the trade is likely to be a thing of the past. Every indication points to early deliveries, and, in fact, very few manufacturers will

wait for the automobile shows to exhibit their 1905 models.

A most interesting forecast for 1905 will be the general development of the agency system and the abolishment of distributing houses or territorial agencies. Manufacturers with large outputs will make every effort to do business direct with dealers, and no town of ten thousand inhabitants or more will be overlooked. This applies to all sections of the country, with the possible exception of the Pacific Coast, where the trade will find it much to their advantage to deal through distributing agents or branches. This means, in all probability, that there will be at least one thousand more agents handling automobiles in 1905 than in the last year, and everything indicates that the manufacturers with factory facilities and capital behind their enterprise will be able to supply the demand.

The importation of foreign cars has reached its apotheosis this year. In fact, it is no trade secret that very few of the importers can show a profitable balance on the right side of the ledger. The late deliveries and duty to be paid on foreign cars and the immense cost of doing business in New-York have made the road of the importer a hard one. It is also well known that fully as many machines were imported direct by individuals as were sold by importers in this country.

While riding over the perfect highways of Europe foreign cars and tires make a most excellent showing, but for all around touring purposes the American touring car is giving general satisfaction, and next year will find it fully up to the standard of foreign cars and built on lines suitable for American roads.

Thoughtful Mechanics.

In nearly all of the conspicuously successful manufacturing establishments the value of the workman's brains is recognized. It is not enough that he should work with his hands. Mere manual labor is plentiful, easily secured and of known value.

Brains, in conjunction with manual skill, is, however, a scarcer and more costly commodity, and the difficulty of procuring it is in almost direct ratio to the avidity with which it is sought.

It is the practice in some plants to sharpen and stimulate in every way possible the inventive genius of the workmen. They are encouraged to devise new methods of performing the various operations intrusted to them and to make improvements in the ma-

chines and tools in use in the shops. Suggestions of all kinds are invited, and when made are listened to with close attention. In short, every possible effort is made to arouse the ambition of the men and stimulate them to give the best they possess to the work in hand.

That the value of the workman's initiative is also recognized in the automobile industry is made plain by the efforts one well known concern is making to add to its force a number of "thoughtful mechanics." They are avowedly wanted to improve the details of the concern's product, and their pay is to be regulated by their ability to "do things." In other words, men, not machines, are wanted; men with brains, men who can think as well as act, who will not be content to live the humdrum machinist's life, but who will strike out on lines of their own, criticize, experiment and initiate. Such men will find lucrative and prominent berths, and no others need apply.

A shrewd observer remarked not long ago that now, and for the next ten or fifteen years at least, the automobile industry offered an unexcelled field for men—particularly young ones—who were seeking a career which presents more than the usual opportunity to excel.

He is undoubtedly correct. What the electrical industry has been for the last twenty years the manufacture and sale of automobiles will be during the next decade or two. It is destined to undergo an enormous extension and to witness tremendous changes. The many problems, unsolved or only partially solved, presented by it offer an infinity of effort, and upon them can be concentrated all the energy and labor at command for years to come.

"Specials" and "Drives."

As yet the automobile trade has been singularly free of the bargain sales, the "specials" and "drives" that have characterized so many other lines of business. Staple goods have predominated largely. Overproduction has never troubled the industry, and when obsolete patterns had to be disposed of they were so palpably out of the running as to be marketed pretty nearly in the open and at prices that could not fail to move the goods.

This has been largely the result of the conservative policy pursued by the stable concerns. When they decided on a change in patterns it was nearly always made at the right time, i. e., when stocks were either low or entirely depleted. Consequently there was

no large number of cars to throw on the market at sacrifice figures.

Yet it should not be assumed that "drives" are a wholly unmixed evil, much less that the industry will remain free of them indefinitely. On the contrary, they are sure to come, and they will do some good as trade stimulants. There are buyers who are always on the lookout for "bargains," and others who cannot afford to pay full price for the best and are willing to take something that is without the very latest wrinkles or improvements, provided it is offered at a reduced price.

Every time a change is made in the construction of a car some parts are left over, and unless some speedy disposition is made of them they accumulate uselessly and are finally consigned to the scrap pile. A much better disposition of them is to make them up into a machine that can be sold to agents as a midseason offering at a price that will make it worth while, both for them and for the class of retail buyer already referred to, to make a special push on them. The summer dulness at the factory makes it an easy matter to put through a limited quantity of such cars.

Of course, a move of this sort is out of the question if there is any large number of cars remaining in the hands of either the maker or dealer. The sale of such a car would hurt the regular sales to some extent, and should only be undertaken to induce trade, to tempt hesitating customers who could not be brought to the purchasing point except by making a concession of this kind.

Many Four-Cylinder Cars in 1905.

Already it is apparent that 1905 will see an enormous increase in the number of four-cylinder cars. The indications are that the increase will cast the present year quite in the shade in this respect, although it has frequently been dubbed the four-cylinder year. The demand for cars of this type has been strong and insistent all the season, and the futility of opposition to it, even if any exist, is generally recognized.

The most noteworthy feature of the drift in this direction is the tendency toward popular prices. Figures which a year ago would have been quite out of the question are to be named for what will be the popular car next year—a four-cylinder vehicle with detachable tonneau. It will be a touring car in everything that the term implies—powerful, roomy and comfortable.

As yet the price is a secret which is guarded with the utmost solicitude. A cu-

rious and amusing feature of the mystery in which it is sought to enshroud the matter is the endeavor to mislead competitors. In a deeply confidential manner a hint is dropped, so that it will reach the news seeker of rivals—and in every case the price mentioned is in excess of the figures which have really been decided upon!

Risks of Retailers.

In the conduct of any business that portion of the "Profit and Loss" account which appears on the debit side of the ledger cuts a figure of no small importance. Losses are bound to occur. No business, no matter how carefully conducted or along whatever lines designed to eliminate credits, is wholly free from them. In some hazardous lines of trade they average as high as 10 per cent, while some statisticians place the general average of all businesses as high as 5 per cent.

Viewed superficially, the retail automobile business, as at present conducted, is about as free from trading risks as could be desired. The overwhelming majority of sales are for cash—a deposit being made with the order and the balance being paid before delivery of the machine. Nothing simpler or safer than that could possibly be imagined. Of course, there are other risks—such as the liability in case of accident, with its wide ramifications, extending to a vehicle collided with and its passengers, pedestrians and bystanders, and even, in extreme cases, to the passengers in the dealers' car.

Indeed, this matter of liability is one of the dealer's greatest cares and worries. He never knows when he is going to incur liability of some sort. One of his cars may frighten a skittish horse, and even if the preposterous damages asked for are impossible of recovery, he will be put to a lot of trouble and expense to defend or compromise the suit. Fines for alleged violation of the speed laws are another fruitful source of expense, and are sometimes the more aggravating because of the interruption to business that may result in consequence of the arrest of an employe engaged in making a demonstration. Then, too, the effect on the mind of a prospective purchaser is distinctly bad. The average dealer traces many lost sales to this cause.

Another source of annoyance and possible direct pecuniary loss was brought to our notice recently. A customer left a second hand car to be sold, placing a nominal price of \$550 on it, but stating that if necessary to dispose of it \$400 could be accepted. The car

hung fire for awhile, but finally an opportunity came to sell it at the lower figure and the deal was quickly made. Then, when it came to making settlement with the owner he denied having named the knock down figure. A heated argument took place, and ended in a threat to bring suit for the full amount. Even should it come to trial and be won by the dealer, an outcome not at all certain, the case would entail an expenditure of time and money that can ill be spared.

Such things as these are in addition to the ordinary expenses and risks incident to the conduct of a retail business of the sort. They effectually dispel the illusion that because cars are sold for cash there is much profit and little loss for those engaged in it.

Poor Fellow!

Major Henry L. Higginson, that firebrand of Massachusetts motorphobes, has been stirred up again.

Any one who ever has heard an angry parrot screech is readily able to remember the character of the sounds.

Listen to this shriek, reported to have been uttered at Manchester-by-the-Sea by the doughty major:

"Lock 'em up! Lock 'em up, and keep them locked up for six months. That's the only thing to do with these automobile people. What do they care about a \$10 or \$15 fine?"

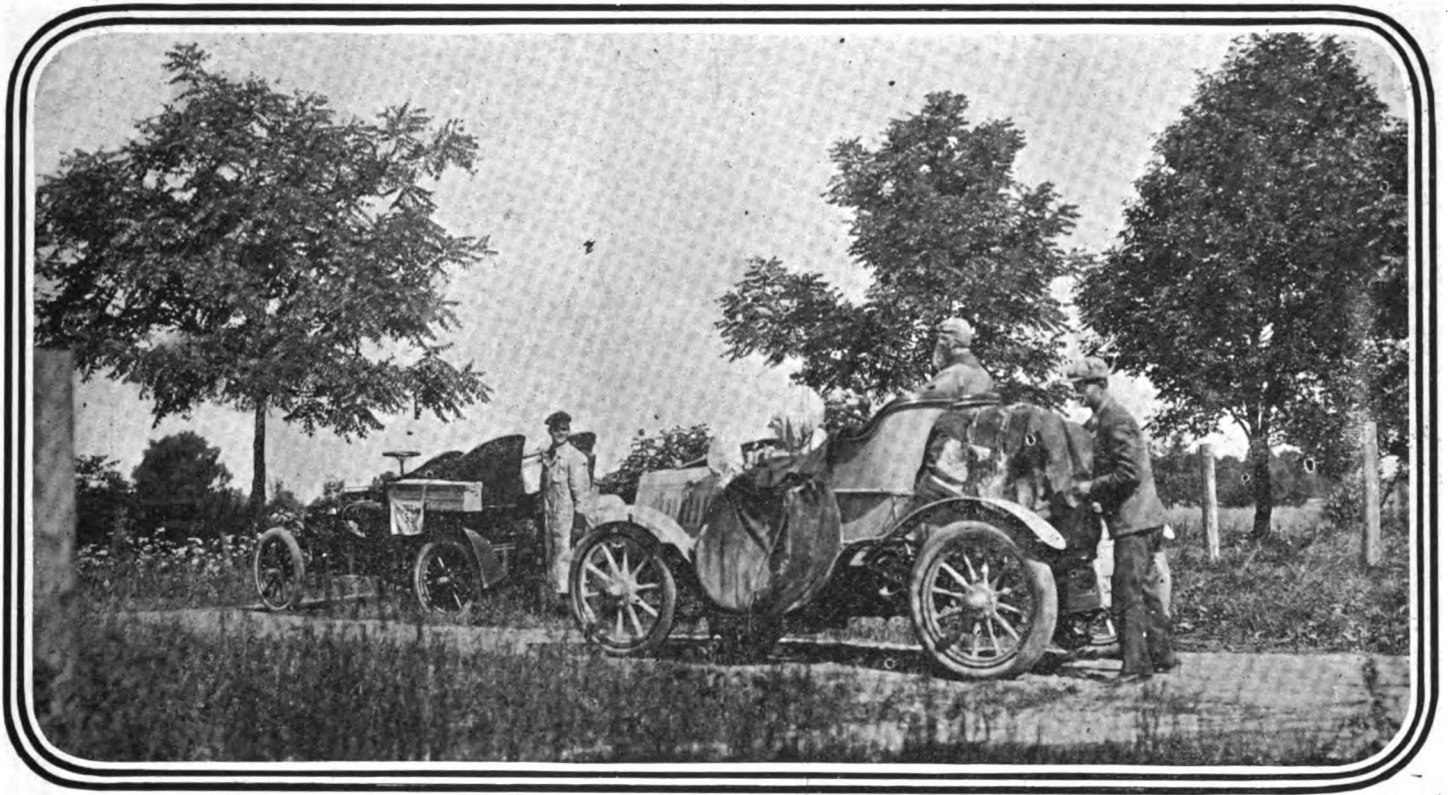
Further, he is credited with this remarkable utterance:

"It's intolerable the way these automobile people monopolize our roads here. And their rudeness! It is simply intolerable! We ought to build a big park and put them in it. Then the rest of us might have a chance."

Too bad, too bad! Such a nice person as he might be, too. Perhaps it is inherited, poor fellow. Wonder where his ancestors were when the opposition to the introduction of umbrellas and railroads and steamboats was going on?

More and more often we hear of the automobile in the role of Good Samaritan. Last week a chauffeur, while waiting for his employer, Richard Stevens, in Hoboken, N. J., was accosted by a doctor and a priest, who wanted to reach a man who had been struck by a train eight miles away. The chauffeur rushed them to the scene. The last rites of the church were administered to the man, and he died two hours later. Yet this is the modern vehicle in which mossbacks can see no virtue.

St. Louis Tourists Have a Hard Finish.



J. M. WATERS (PANHARD), BORROWS OIL FROM SAMARITAN DWIGHT HUSS (OLDSMOBILE).

After leaving Toledo, the worst of the troubles of the tourists en route to St. Louis seem to have begun. The scorching continued, and many of the mishaps were undoubtedly due to fast driving and recklessness. No fatalities occurred, however, and no very serious injuries were sustained, although there were some narrow escapes, including one collision with a railroad train. The tour committee was not disappointed in its expectations of having reinforcements along the route, and before Chicago was reached the tour assumed quite noteworthy proportions. Last week the story, day by day, carried the tourists up to Toledo, where they arrived on Wednesday night. This week the story of the rest of the trip is told, to the finish at St. Louis.

TOLEDO TO SOUTH BEND.

South Bend, Aug. 4.—Only sixteen of the thirty-six touring cars in the run accomplished the double task of covering 176 miles in a day. Twenty laid up at Waterloo, which was to have been the regular night stopping place, or tarried at Bryan and Kendallville hotels. The roads were in excellent shape, although a little dusty. The tourists who made the complete trip did it in anywhere from seven hours and twenty minutes, the time of Webb Jay, in a White, to twelve hours. They arrived here dust begrimed, hot and tired.

On the way there was some fast travelling. The farmers along the line had been prepared, and they caged the hens who cross

the road so regularly and come to grief, and tied up the dogs which will bark at an automobile and occasionally misjudge the speed of the thing and get caught. The farmers themselves took a holiday, and with their families occupied places along the roadside. Speed was seemingly what they wanted to see, for they shouted to the cars to hurry. Milk, fruit and edibles of every sort were freely offered to the tourists. All along the line people held papers, which they consulted whenever a car passed to learn of the name of the car and its occupants. In the towns the crowds were very large.

The course closely followed the line of the railroad, and grade crossings became a menace. James L. Breese nearly came to grief at Goshen, saving himself by presence of mind. The big Peerless car finished its run near Perryville, where it struck a train. The occupants jumped and escaped with only slight injuries. The front end of the big car was wrecked, and it had to be shipped home. The train also was damaged. R. P. Scott will continue the tour as a guest of Charles J. Glidden. B. Clifford Swinehart, the solid tire missionary, endeavored to get out of a deep rut in too much of a hurry and went into a ditch with his Yale, but he got out again without injury. The Olds tonneau jumped over a rise in the road and came dangerously near having a bad accident. The farmer in front of whose property the incident happened at once piped all hands and hewed down the bump, protesting that the automobilists, coming a day early, had given him no chance to do it before. He

took the blame all on himself, and this is typical of the general feeling toward the automobilists.

The Buckmobile picked up a hoop, and it went round the wheel and so wound itself into the car that a long delay was caused. Broken springs coming from too sudden trips off ideal roads, which abounded, to bad roads, which were the exception, and tire troubles, delayed many. Most every one got through, however, to Waterloo, and all are expected at South Bend in time to start on Saturday, excepting only the big Peerless car.

Two days were allowed for all to get here, in order not to disturb the schedule, although it was permissible to make the run in one day. The tour will not go on from here, therefore, until Saturday morning.

A DAY AT SOUTH BEND.

South Bend, Ind., Aug. 5.—The twenty remaining tourists who did not arrive yesterday did not all reach this city to-day. E. H. Wallace and wife, who turned over yesterday met with other troubles. A connecting rod broke and wound up in the gears. They were compelled to ship the car home, continuing their trip by train to Chicago. The others completed their long trip from Toledo at all hours of the day, some having stopped at Bryan, some at Kendallville and a few at Waterloo for the night. Many came as far as Mishawaka, five miles out of South Bend, and as pretty a suburb as any city ever had, and there stopped for dinner, supposing it to be Elkhart, twenty miles out. The route



MR. AND MRS. HARLAN W. WHIPPLE IN HEARTY GOOD HUMOR.

cards said Elkhart for the next stopping place after Goshen, but the confetti led the tourists along quite another road. Poor gasoline secured at Kendallville caused the delay of many of the touring party.

To-night there arrived from Chicago an escort of fifteen cars, headed by John T. Farson, president of the Chicago Automobile Club, in a 60-horsepower Apperson car. Mr. Farson brought his wife, two sons and some friends. F. X. Mudd, the chief of this division in the tour committee, arrived in a Locomobile, protesting volubly against scorching. "I travelled ten miles forward and two miles upward at forty-five miles an hour," said Mr. Mudd, so it is evident that even the Chicago touring committeeman is not above a scorch. To-night he endeavored to convince the men from the East that there should be sundry controls established along the route to Chicago, passing beyond which would result in disqualification for the contestants. He also tried to convince the committee that 7:30 should be established as a starting time, but in all of these he was unsuccessful, for Chairman Post said this was not an endurance run, and men might travel as they pleased, providing they registered each night at from 7:30 to 10:30. Mr. Mudd brought with him for confetti beans, and the tourists laughed, for microscopes would never discover the trail of white beans on a chalky white macadam road.

To-night the Indiana Club, a Studebaker Brothers club, entertained the visitors at a stag party, and Mr. Goodridge presided.

President Whipple found the source of his troubles to-night. Wires in both magnetos had been broken, probably by the jar of the engine. Repairs have been effected here, and the president believes that his troubles will now be over.

Those tourists who made the 176-mile run in one day from Toledo to South Bend enjoyed a solid day of rest after their labors, visiting with the Chicago contingent throughout the day. One tourist alone went on to Chicago, Glen Collings and family. J. M. Waters travelled to Chicago by train, leaving his Panhard to be driven up by E. B. Getchell, his engineer.

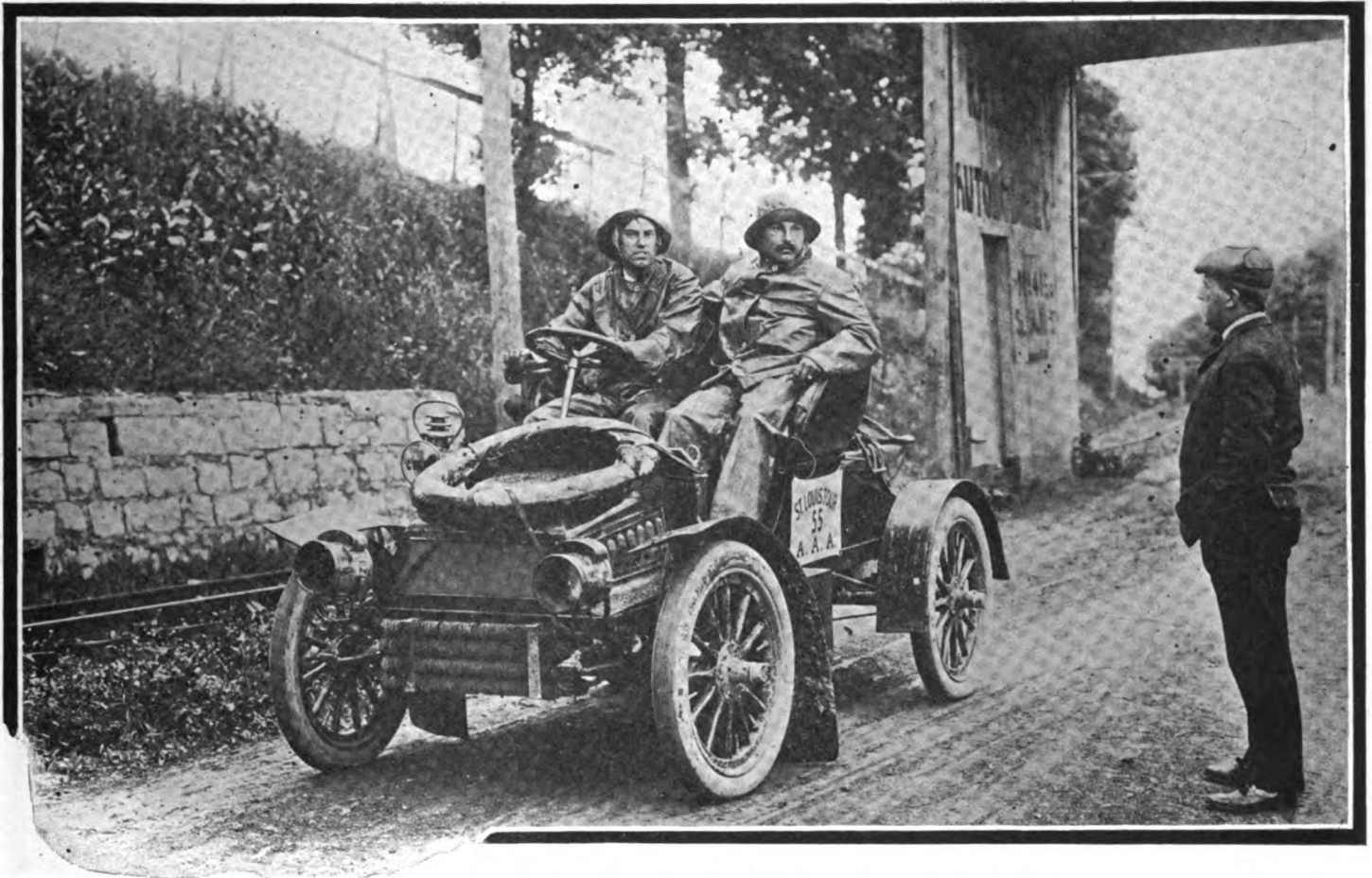
SOUTH BEND TO CHICAGO.

Chicago, Aug. 6.—This has been a day of mishaps in the St. Louis tour, and the number of them and seriousness of one has given the men who travel fast down hill and up hill, and over good, bad and all other kinds of roads, an opportunity to ponder upon the error of their ways.

The first accident of the day happened to the Cadillac car, driven by R. A. Sturtevant and R. A. Kent. Nearing La Porte, the car got beyond the control of these members of the Chicago escort while travelling down hill. Mr. Kent was at the wheel. At the base of the incline it ran off the road, turning over in a ditch probably six feet in depth. Mr. Kent had a broken arm, the break being compound, and Mr. Sturtevant had a badly injured leg. Shortly after this a White steamer came along, driven by Dr. Gifford,

of Cleveland. Less than a mile beyond the point where the Cadillac lay in the ditch, the doctor lost control of his machine and also went into the ditch. The members of the party all escaped, and the car was righted and driven to Chicago, going as good as ever. The reports of these two mishaps shocked those who had reached Valparaiso, and they were again startled when reports came from a point two miles beyond Valparaiso that E. F. Meyers and Robert John, the latter driving, in a Winton escort car from Chicago, had turned over while making a turn at full speed. Again the occupants of the car were reported to have escaped. Then came the report that Harold Pope, in the Pope-Hartford, had rescued a lady whose horse, in running away through fright of the automobile, had pitched her headlong. The lady was uninjured, but the carriage was damaged.

These accidents happened on a 106-mile stretch of road which furnished really excellent travelling, with the exception of a few stretches of coarse sand. Thirty-five of the regular touring cars and fifteen escorting cars left South Bend between 4:30 and 10 o'clock, and all of the tourists reached Valparaiso and then passed on, not stopping for the noon lunch prescribed by F. X. Mudd. Hammond was made the noon control, and probably twenty-five of the thirty-five cars stopped there. After dinner Mr. Mudd, John T. Farson and Augustus Post rounded up the tourists and mapped out plans for entering Chicago in single file. After this they



HAROLD M. POPE AND CHAUFFEUR (POPE-HARTFORD) GARBED FOR HEAVY WEATHER.

started, all back of the leaders eating dust by the peck. On reaching South Chicago, by devious winding ways over rough block pavements, the tourists assembled in front of the German Building on the Lake Front, and were greeted there by a hundred or more Chicago automobilists, who came down as an escort into the city. Some of the tourists had waited at the control three or four hours. At 4 o'clock, the tourists, arranged in order of their entry number, started for the city, and, after covering miles over the beautiful boulevards through lanes of cheering people, they reached the business section, toured around a few blocks over slippery pavements and then back to the Auditorium Annex, where they disbanded.

To-night there was open house at the Chicago Automobile Club, with no special entertainment. To-morrow (Sunday), is to be spent by the tourists at the Country Club in Evanston, many going out by special invitation in the cars of the club members.

CHICAGO TO PONTIAC.

Pontiac, Aug. 8.—Immense gatherings of country people and larger gatherings of townspeople met the tourists with a royal welcome on the first day of their third week of travelling, en route to St. Louis. Illinois did not prove so bad after all, as far as roads were concerned. A little rain would have done no harm; but none cared to see the rain start, for it might prove too much of a good thing. A very little water would

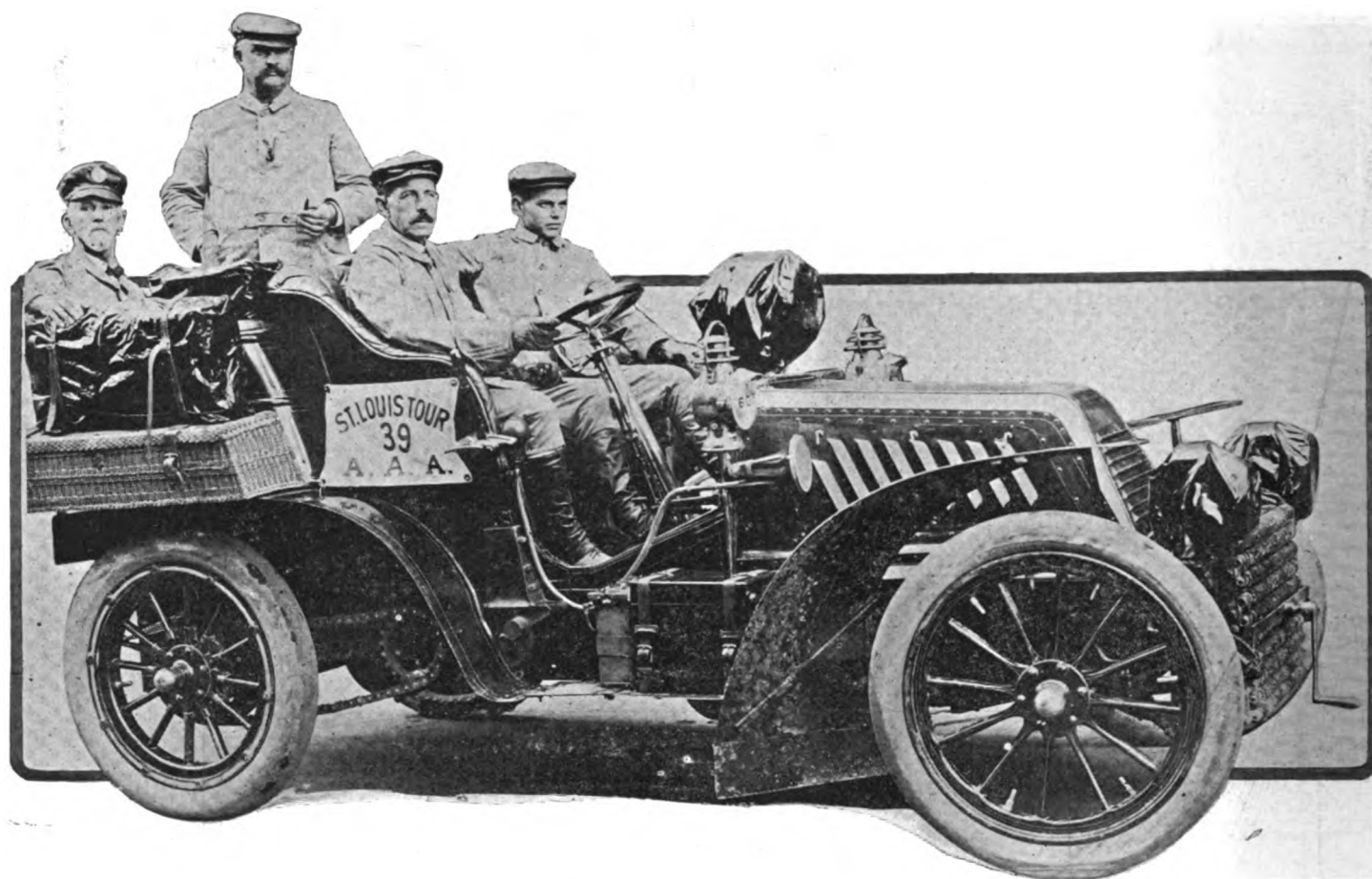
have made to-day's roads midst the corn fields of Illinois, almost impassable; as it was, they were hard and treacherous, highly arched in the centre, with beaten ruts along the side of the arch, in which the cars slipped and suffered. Tires gave out under the strain, many of them having stood up from the start, and a dozen tourists had tire troubles. The dust was uncomfortable, but preferable to mud. In the dust, the cars ran far too closely together for comfort, and the tourists, upon reaching this city, were a sight for the gods, being masked in black dirt and their faces unrecognizable until after a bath.

The hotel was quickly filled. It had no bathroom, and the tourists lined up to use the one bath tub at a local barber shop. Scores, who were assigned to private houses, had rather the best of the bargain, since they secured the much needed immersion. Many went through to Bloomington, the city originally selected for the night stop, before the day's run was cut forty miles, and this city was made headquarters, because of the condition of the roads some time ago. To-day Bloomington might have been easily made by a run of 132 miles.

Several Bloomington enthusiasts were in Pontiac, barking for their city, urging the tourists to go on. Bloomington men wanted to have the automobilists there, and to-morrow will give them a royal good time at noon. To-day the Joliet enthusiasts gathered the

fifty-odd tourists into line outside of Lockspur and escorted them into Joliet, five miles, where dinner was eaten by some, though others took a sneak and got out ahead of the bunch, avoiding the dust in this way. At Morris there were thousands in the street to greet the tourists and to invite them to stop. In this city every house had been decorated, and flags were strung across the street for block after block. Promise of showers to-night will send most of the tourists to bed anxious for the morning, and calls will be left for daylight in order that a very early start may be made.

Pontiac, Ill., Aug. 9.—At 12:20 this morning an Olds tonneau, belonging to F. A. Benson, of Chicago, caught fire in a small repair shop across the street from the Phoenix Hotel. Mr. Benson, his wife, son and H. Standloff, and Irving Betts, started from Chicago yesterday in the machine. A leaking gasoline pipe needed repair, and while at work on this a mechanic turned on the drain cock instead of a shut-off, the gasoline running then onto a lamp flame. The machinery under the car was burned seriously. An explosion followed which shook the hotel and brought the guests out in all sorts of apparel. In an adjoining garage the Packard car of Tom Fitch, the Buckmobile of Mr. Seaton and Esselstyn's car were stored. This was locked, but with Tom Fitch in front and President Whipple, Harry Sheldon and several others behind, it was broken into. The



F. N. MANROSS, OF FORESTVILLE, CONN., IN A 24-HORSEPOWER COLUMBIA.

Buckmobile and the Packard were shoved out, but the other car had to be abandoned. Fortunately, the fire was put out before the abandoned car was injured.

A score of the tourists' cars were from fifty to one hundred feet from the fire, in the rear yard. Among the number were the car of J. M. Waters and the Napier of Mr. Glidden. Waters flew out in his underclothes and rescued his car. Mr. Glidden had not retired. The other cars were pushed into the street by natives and the tourists. The Olds was a partial wreck. It may be rebuilt. Mr. Benson had an Olds runabout catch fire some time ago, and partially burn. He traded for this car.

SPRINGFIELD TO ST. LOUIS.

St. Louis, Aug. 10.—On the last of the fifteen days of touring the run was more broken up than ever before. The great run is over, and most of the tourists who started this morning are here, but the majority of them did not get here in time for the parade into the city, which was scheduled to start at 4 p. m. Bad roads, made worse by rain, were the cause. The ninety-one miles from Springfield furnished the most troublesome going of the whole trip of 1,300 miles.

Rain during the night had laid the dust on the roads of black soil and sand between Springfield, Ill., and Litchfield, forty-four miles, but south of Litchfield the storm had been much more severe, and the forty-two miles between Mount Olive and East St. Louis was ridden over winding paths of greasy substance that defied traction and almost terminated the tour for a score of machines.

Forty-seven cars left Springfield this morn-

ing for the concluding day's run of ninety-six miles to East St. Louis, but at 4 o'clock, the scheduled hour of parading from that place into St. Louis, only twenty-four of the participating cars had put in an appearance. Later other survivors straggled in, and there is every indication that all of the machines will be reported early to-morrow. Five cars came in along the National Highway and several others are known to be still along that route.

Because of the deplorable and dangerous condition of the roads, the unavoidable race to be first at the finish resolved itself into a mud struggling competition. W. C. Hurlburt (Cadillac), who left Springfield at 2 o'clock in the morning, was the first to officially report at East St. Louis at 1:15 o'clock, but he was followed within a few minutes by A. A. Post and Webb Jay, in White steamers. Their starting time had been 6:30 o'clock.

The first of the foreign cars was Charles J. Glidden's Napier. J. M. Waters's Panhard came along five minutes later.

Harlan W. Whipple arrived by train. When about fifteen miles out of Springfield he broke the crank shaft and tore out the engine bed of his Mercedes on the rough roads. J. M. Waters, who overtook him, towed the Mercedes three miles into the railroad station. B. C. Swinehart (Yale) broke a steering knuckle near Glenark and was towed to a blacksmith shop.

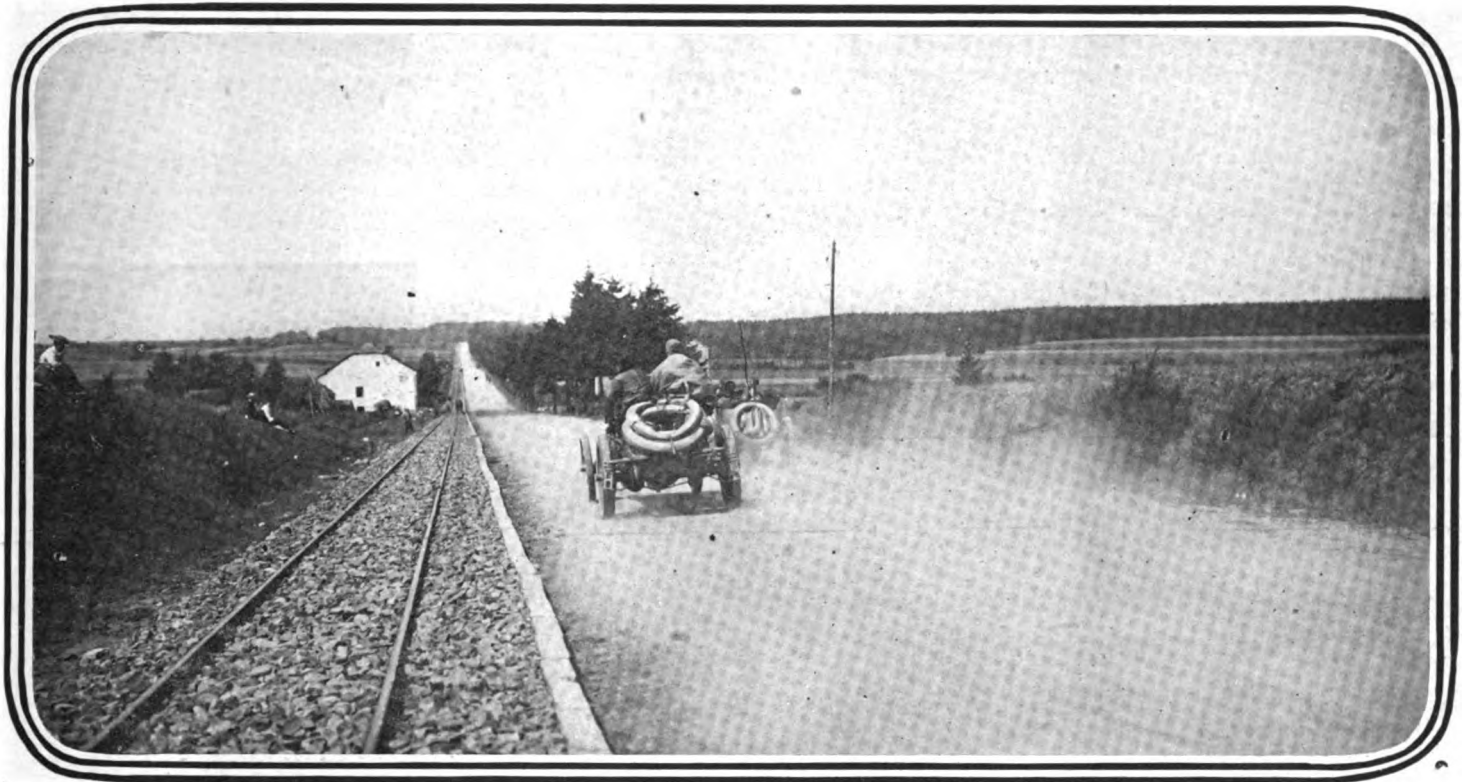
Several narrow escapes from sliding over embankments were reported. R. H. Johnston's big Peerless slid broadside into a team of horses, knocking one of them down and overturning a wagon. Because of the belated arrivals the certificates to owners of surviving cars will not be issued until to-morrow. The tourists will be entertained to-morrow by local automobilists, and on Friday will join in parade to the Exposition grounds.

Tourists in the parade into St. Louis in the order of their arrival at East St. Louis were W. C. Hurlburt (Cadillac), A. A. Post (White), Webb Jay (White), E. T. Fetch (Packard), R. H. Johnston (Peerless), C. H. Birchwood (Haynes), D. B. Huss (Oldsmobile), Carl Page (White), P. P. Pierce (Pierce), W. C. Temple (Pierce), George Lowe (White), A. D. McLachlan (Royal), H. C. Esselstyn (Franklin), Harold Hoag (Covert), Charles J. Glidden (Napier), J. M. Waters (Panhard), C. H. Gillette (Pope-Hartford), H. F. Lesh (Pope-Toledo), A. D. Walte (White), H. L. Pope (Pope-Hartford), P. F. Megargel (Elmore), B. A. Ledy (Rambler) and R. G. Hausellin (Rambler).

James L. Breese (Mercedes) and A. L. Pope (Pope-Toledo), who came in the day before, were also in attendance, as were also Hart D. Newman (White) and W. Hushead (White), who came by the National Highway. There was an escort of forty local automobiles, headed by Mayor Wells in his Peerless.

In addition to those in the parade the following tourists had arrived up to 10 o'clock to-night: Dr. W. H. Clifford (White), Cleveland; F. N. Manross (Columbia), Boston; F. C. Gales (Winton), Cleveland; H. P. Dyer (Winton), Cleveland; J. R. Blakeslee, jr. (Winton), Cleveland; T. C. Collings (Peerless), Cleveland; W. Moneypenny, jr. (Stearns), Columbus; "Sam" Stone, jr. (White), New Orleans; G. D. Neare (St. Louis), Cincinnati; W. B. Saunders (Winton), Philadelphia; Guy Stone (Rambler), New Orleans; S. J. Twintslad (Knox), Minneapolis; L. A. Wood (Winton), St. Paul; C. B. Judd (Austin), Grand Rapids, and the following from Chicago: F. X. Mudd (Cadillac), F. C. Donald (Pope-Toledo), F. H. Pietsch (Auto-car), W. W. Shaw (Pope-Toledo), W. R. Smith (Pope-Toledo), O. F. Weber (Pope-Toledo), E. R. Hibbard (Larchmont) and J. H. Pallejensen (Rambler).

Punctures Wrought Havoc in Ardennes Circuit.



HEATH, THE AMERICAN WINNER OF THE RACE, MAKING FAST TIME ON A STRAIGHT STRETCH OF ROAD.

Hard fought from start to finish, the third Ardennes Circuit, run in Belgium on July 24, developed into a remarkable contest. After 375 miles of racing, the first three cars were separated by only four minutes. Tire troubles played an important and exasperat-

ing part, and probably had as much to do with the result as the speed or even the handling of the cars.

The race was won by an American, Heath, driving a Panhard car; last year it was won by an Englishman, Jarrott, also driving

a Panhard; while in 1902 a Belgian, de Craheze, also in a Panhard, was the victor. Heath started first and finished No. 1, thus putting to rout the theory, advanced by Jenatzy after the Bennett Cup race, that the first man in a race is handicapped, owing



A HURRIED REPLENISHMENT OF SUPPLY TANKS AT A CONTROL.

to having to clear the road. The second man to finish, Teste, was also in a Panhard, while Clement (Clement-Bayard) was leading at the end of the last lap, but was delayed by a puncture. Teste also had an encounter with the puncture demon, and finished with one of his rear tires missing (as shown in the illustration), after having driven fifty kilometres on the rim. Henry Farman was another victim, he being prevented from getting among the first three by tire troubles.

The race took place in the Belgian Ardennes, over a course longer than that of last year, when it was only 312 miles. This

was off like a shot and disappeared in the distance. At two-minute intervals the other contestants were sent off, until thirty-three cars had started, twenty-six of which were of the heavy and seven of the light class. As there were no neutralized controls—that is, no enforced or penalized stops, the contest was a severe one for both cars and drivers, and to the constant running of the latter is ascribed a large number of the tire troubles.

It was soon seen that a magnificent contest was in progress, but there were few incidents. Round and round went the greater part of the contestants, with almost wear-

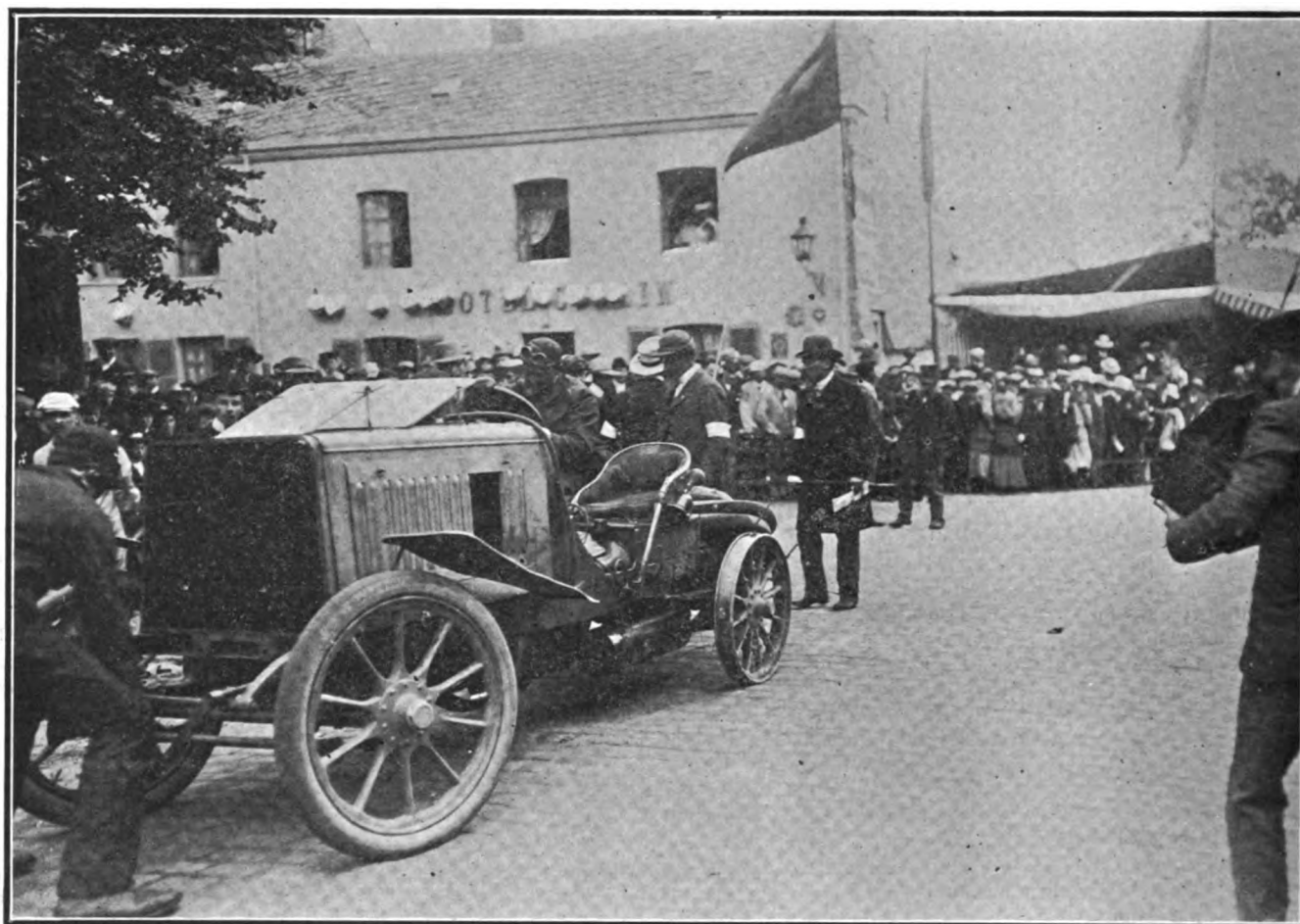
The story of the race in detail is told by the appended table, showing the work of the men by laps:

FIRST LAP—75 MILES

Heath	1:17:30	Teste	1:31:42
Clément	1:15:50	Hemery	1:23:36
Leger	1:15:25	Le Blon	1:16:02
Salleron	1:19:41	Gabriel	1:30:32
H. Farman	1:14:43	De la Touloubre	1:32:47
Rigolly	1:16:30	Fletcher	1:22:27
Duray	1:12:53	Mayhew	1:29:19
Blanchi	1:27:29	Lancia	1:36:20

SECOND LAP—150 MILES

Heath	2:30:31	Leger	3:11:54
Clément	2:33:15	Hemery	2:54:20
H. Farman	2:28:21	Le Blon	2:44:55
Salleron	2:43:32	Gabriel	2:53:44
Duray	2:29:07	De la Touloubre	3:05:07
Rigolly	2:36:30	Lancia	2:53:35
Teste	2:42:41	Mayhew	2:55:44
Blanchi	2:57:40	Fletcher	3:12:25



TESTE (PANHARD) AT THE FINISH WITH ONE TIRE GONE.

year a 75-mile course, covered five times, making 375 miles, was laid out, starting at Bastogne, a little town of four thousand people. The roads were of the usual high European standard, smooth of surface, but hilly in places, with a number of sharp turns. To these was due the fact that the time made, although fast, did not equal expectations; it was slower than that made by Gabriel in the Paris-Madrid race. Heath's time was 6 hours, 30 minutes, and 49 seconds, an average of about 92 kilometres an hour. Teste, the second man, was only 55 seconds behind Heath.

At 3 o'clock on the morning of the race it rained, and laid the dust to some extent. By 4:30 o'clock everything was in readiness, and at 5 a. m. the word was given to Heath, who

some monotony, until it seemed as if the winner would be hard to choose, and that the finish would be more like a horse race than anything else; but the third and fourth laps told, and the machines that had been running with the best began to drop out or reappear only at irregular intervals.

Toward the close it was evident that the struggle lay between three Panhards and the light Clement, driven by young M. Clement, Jr., himself. The Panhards were in charge of Messrs. Heath, Teste and Farman, and there were scarcely five minutes between them when the final lap was commenced. The final lap, however, told terribly on the wheels of M. Farman's automobile. The cover of his left front tire worked off, and for a couple of miles he bumped mercilessly along on the rim at fifty miles an hour.

THIRD LAP—225 MILES

Heath	3:41:40	Le Blon	3:05:39
Clément	3:51:00	Blanchi	4:30:12
Salleron	3:59:10	Gabriel	4:26:00
H. Farman	3:54:30	Hemery	4:31:16
Teste	4:02:15	De la Touloubre	4:35:22
Rigolly	4:06:46	Mayhew	4:31:42
Duray	4:06:30	Fletcher	4:42:58
Leger	4:30:13	Lancia	4:52:12

FOURTH LAP—300 MILES

Clément	5:15:01	Le Blon	5:33:37
Heath	5:19:29	De la Touloubre	6:06:17
Teste	5:12:28	Blanchi	6:01:13
H. Farman	5:19:06	Mayhew	5:55:40
Leger	5:47:15	Hemery	6:33:49
Duray	5:37:21	Lancia	6:23:11
Salleron	6:03:51	Fletcher	6:22:53
Gabriel	5:39:22	Rigolly	5:22:35

FIFTH LAP—375 MILES

Heath	6:30:49	Mayhew	7:27:42
Teste	6:31:44	Leger	7:45:15½
Clément	6:34:43	De la Touloubre	7:48:59
Rigolly	6:42:04	Fletcher	7:53:00
Le Blon	6:54:05	Lancia	7:53:25
Duray	6:55:34½	Blanchi	7:54:10
H. Farman	6:57:29½	Salleron	7:55:34½
Gabriel	6:58:51	Hemery	8:00:35

CORNELL SPUNKY; CLUB CRAWLS

Magistrate Issues an "Explanation" and President Scarritt Recommends Quitting.

After the Automobile Club of America governors met last week and voted to begin impeachment proceedings against Magistrate R. C. Cornell, of New York City, because of his alleged advice that speeding automobilists should be shot, the magistrate came out with a statement which was a verbose and clumsy explanation and denial, all in one, about the remarks attributed to him.

This did not astonish any one. Nobody expected Judge Cornell to plead guilty and say that the Automobile Club governors were doing the proper thing.

After Magistrate Cornell's statement had been published, however, the patent, collapsible backbone of the Automobile Club shrunk into a small heap of old bones. Judge Cornell announced his intention to fight any attempt to have him deposed from the bench. Brave as ever when talk of flight is made, the Automobile Club promptly receded from its position.

When he first heard of the action of the automobilists Judge Cornell said:

"I shall engage the services of the best lawyer I know and shall fight this thing through to the end. It seems to me now that I have kept quiet too long. Ever since this matter was first agitated I have been lampooned and annoyed without reason, and now I mean to put a stop to it."

The following statement was then given out by the magistrate in typewritten form, and what can be read between the lines of it is interesting:

MAGISTRATE CORNELL'S STATEMENT.

"In the first place, I never advised anybody to shoot at anybody else, but in the case which has been so much quoted I unwisely made a side remark to a bicycle policeman which deserves explanation.

"The case was this: One day last month a bicycle policeman whom I have known for several years as a straightforward and reliable man arraigned an automobilist before me, who, I understand, was a 'demonstrator' for one of the automobile salesrooms, and charged him with driving an automobile at a furious rate across Fifth avenue and through Thirty-eighth street, and in doing so he forced a cab, in which there was a woman passenger, upon the sidewalk and against the railing. There were also a number of pedestrians passing at the time who had to flee to adjoining stoops to avoid being run over.

"It was then I said to the bicycle policeman that in case any of these people had been run over and injured I should not have blamed them very much if they had shot at the automobilist. This was not intended for

publication, but was a side remark addressed to the officer. In this particular case the defendant pleaded not guilty, and alleged as a defence that he was in a great hurry to catch a ferryboat and didn't know exactly how fast he was going. I learned yesterday that at Special Sessions he changed his plea to guilty and was fined \$25.

"The next day I was visited by a reporter, and I had a brief interview with him. I said that while not all automobilists violated the law, yet in my neighborhood very many of them did. I instanced some cases where outrageous things had been done by fast going machines, to my own knowledge, and told of a case where a man in an automobile almost drove me and my wife into another automobile while running at a terrific rate of speed, passing me from behind on the right side on a narrow road. I told the reporter that I shouted to the driver to stop, and, as usual, no heed was paid to that, and the automobilist disappeared in a cloud of dust. Then I said that that was a case where probably the only thing that would have stopped the automobilist was a shotgun.

"Being asked then if that was my idea of a remedy against people of this sort, I said decidedly 'No,' and told the reporter, in my opinion, the only effective way to stop reckless fast driving would be to let the owner of the machine, provided he were present in the machine at the time of the violation, suffer imprisonment for a short time. I was shocked to find the next day that the interview had been colored so that it appeared as if I had advocated shooting as a legal remedy.

"And unfortunately, I think, upon the same day appeared an account of a deputy sheriff who shot a pistol at the tires of an automobile at Patchogue. Now I see that this was laid directly to the advice I am supposed to have given, when the fact is, and I have a letter to prove it, that the young deputy sheriff who fired the shot had never heard of me or seen the article, and he did it entirely upon his own volition.

"While I was upon my vacation last week at Southampton I received a letter from the secretary of the Automobile Club of America asking me to give to the governors of his board my version of this matter, to which I replied that I regretted that I could not give any version to his club."

The foregoing statement by the magistrate was issued on Thursday, the day following the meeting of the Automobile Club governors and the adoption of their resolution. The next day, Friday, President W. E. Scarritt of the Automobile Club issued the following statement:

PRESIDENT SCARRITT'S STATEMENT.

"Magistrate Cornell enters a general denial of the serious charges made against him. This being the case, I shall advise the governors of the club to drop the impeachment proceedings which they had instructed our attorney to begin.

"Judge Cornell was undoubtedly indignant, as we all are at times at the reckless driving

of a particular automobilist. On the impulse of the moment he doubtless uttered remarks the trend of which he did not foresee and which, in his cooler moments, he himself admits were unwise.

"Judge Cornell should know that the Automobile Club of America stands with him, and every other good citizen, in opposition to dangerous and reckless driving on the highway. In reply to a courteous letter from us, asking whether he had made the statements attributed to him by the press, he replied that he regretted that he could not comply with the request made by the board of governors, as he saw no reason why he should furnish to it his version of the incident alluded to.

"He having refused to either confirm or deny the statements as published the governors deemed it wise to ascertain in another way whether the magistrate had been correctly reported. I am gratified that his general denial and explanatory statement make it unnecessary for us to proceed with the impeachment proceedings.

"The Automobile Club of America, as repeatedly stated, stands for good roads, good laws and good behavior, and the good behavior applies to the man on the bench quite as much as it does to the man behind the wheel."

Indiana Farmers on the War Path.

The "embattled farmer" is on the warpath again. Individually he is angered at the automobile, and collectively he has denounced it and planned reprisals. This particular brand of farmer has Northern Indiana for his habitat, and he has started a crusade which has for its object the enactment of legislation which will limit the speed of the machines and provide for the giving of an alarm at the approach to all crossings, with heavy penalties for violations.

Farmers at a number of places are holding indignation meetings, and will take the law into their own hands if the officers do not act. The feeling has become so bitter in localities that it will play a part in politics. Organizations have been perfected to fight the election of legislative candidates who will not pledge themselves to provide strict laws for the operation of automobiles.

Shooting Constable Under Arrest.

Sherman F. Wicks, the young deputy sheriff of Patchogue, Long Island, who fired two shots into the automobile of John Foley, Jr., of Manhattan, because he would not halt on the officer's demand, was arrested there on Friday, at the instance of Foley, backed by the Automobile Club of America, on a charge of felonious assault.

Wicks appeared before Judge John R. Vunk with his counsel, R. S. Pelleireau. Foley appeared with his counsel, Timothy M. Griffing. Wicks waived examination. Judge Vunk fixed the bail at \$500, which was furnished.

Wicks will now have to appear before the grand jury, which convenes in Riverhead the third Monday in September.

LA ROCHE COMPLETES RUN.

(Continued from page 713)

would be an hour or two to take off the wheels and grease them and to go over and clean and oil some of the parts I haven't been able to get at while running."

The authenticity of Mr. La Roche's performance was attested by Norris N. Mason and H. H. Everett, who went along as volunteer observers, relieving one another as La Roche and Alexis Le Blanc, his alternate, relieved each other at the steering wheel. Mr. Mason was observer to Mr. La Roche and Mr. Everett to Mr. Le Blanc. Lee Strauss was a passenger most of the way going and coming. The run was not sanctioned by the American Automobile Association, as has been reported, nor the observers appointed by that body, but there seemed to be no good reason to question the performance. The men involved were persons of repute, and there was every evidence of veracity in their unconflicting statements. When this point was raised in the presence of the entire party Mr. La Roche remarked: "No one could appreciate how almost impossible it would be to 'fake' such a performance unless he has been on a trip. We were under surveillance everywhere, and nothing could very well happen without something of it leaking out. Besides, when any mishap of the sort happens it is generally sure to be in a city or town where there are plenty around to see it.

When you think of all the places we went through, and remember that we had a big sign in the back of the car announcing the object of the run, you will realize that it would be unlikely for us to be cranking the engine anywhere without word of it being passed along."

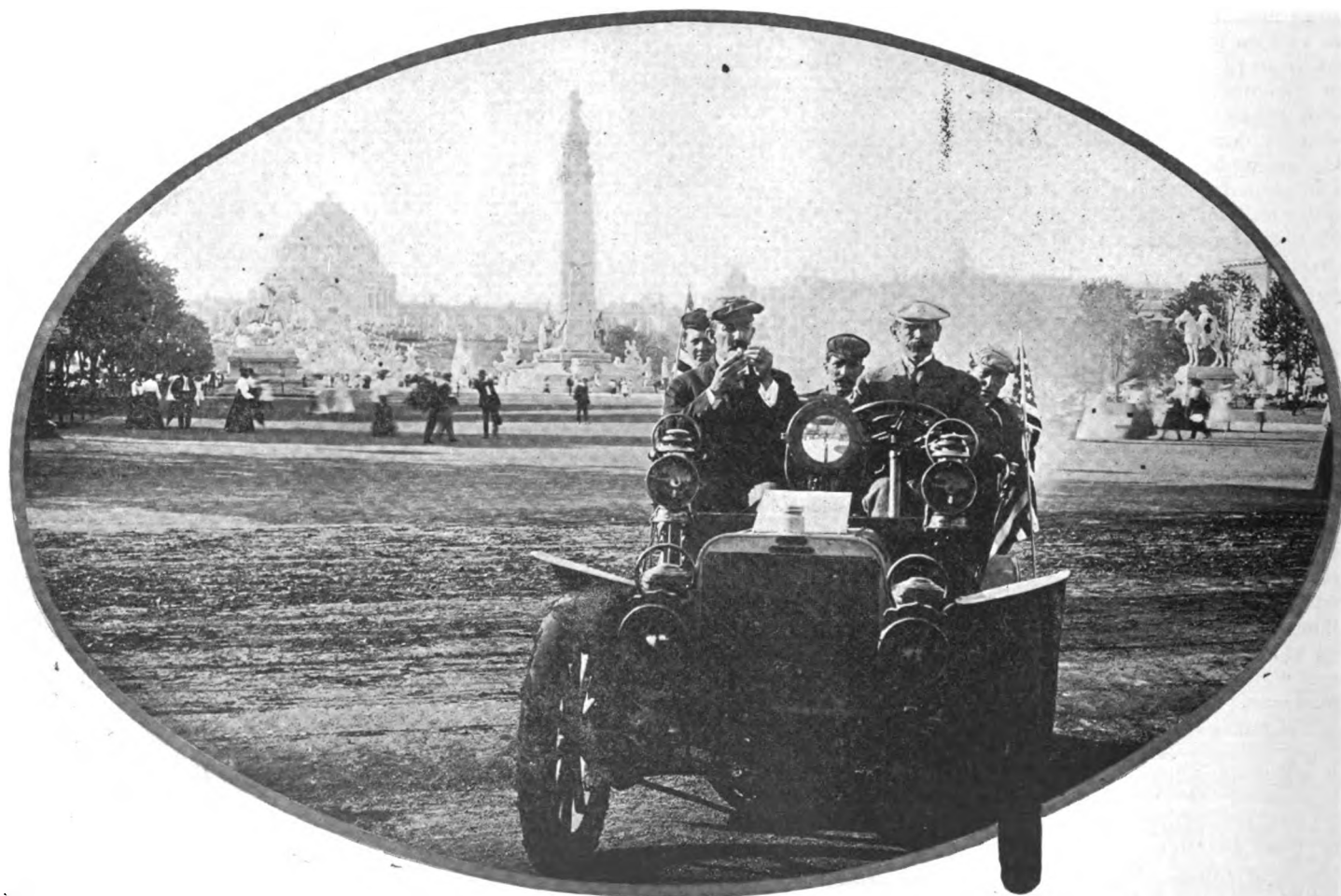
The trip back from St. Louis was a good deal of a triumphal march. Almost every one knew of the coming of the car and was on the lookout, and there were receptions all along the route. The car at last reached Philadelphia on Monday at 10 a. m., and there Mr. La Roche had to stop for a reception at the Walton. He left there at 7:30 p. m. and drove to Perth Amboy, N. J., where he arrived at 2 a. m. Samuel Shaw, the Darracq agent at Philadelphia, rode with Mr. La Roche from Philadelphia, and he kept the car moving slowly about town while Mr. La Roche took a nap until 8 o'clock, when his escort from New York arrived.

Lieutenant Alexis Le Blanc, who started with Mr. La Roche and was his alternate at driving, left the car at Chambersburg and took a train to New York in order to arrange for special ferryboats to convey the car across from Perth Amboy to Tottenville, Staten Island, and again from St. George, Staten Island, to the Battery, on Manhattan Island. Chartered boats were necessary in order that the engine might be kept running while crossing the ferry.

At 5:30 on Tuesday morning two Darracq cars, one driven by Mr. Le Blanc and the other by A. J. Picard, left the Darracq place in West Thirty-eighth street and started to meet the record breaker. An "unpinched record" to the Battery was made in fourteen minutes, the streets being clear, and shortly after 8 o'clock the party greeted Mr. La Roche at Perth Amboy. There were six in each car at the start, all newspaper men, except W. H. Ketcham, president of the American Power Boat Association, and a stop was made at the Columbia Fishing Club, at South Bay, Staten Island, where the president of the club, Robert R. Debacker, was picked up, so there were an ominous thirteen to greet the hero of the longest non-stop trip on record. Mr. La Roche was accompanied by H. H. Everett and Lee Strauss, who had started out with him. Norris Mason, the other observer, returned to New York with Lieutenant Le Blanc.

Of course, photographs had to be taken as soon as the ferry was crossed and Mr. La Roche was at Tottenville, within the limits of New York City. Then there was a breakfast at the Fishing Club and a swift run to the ferry at St. George. The Battery was reached at 10:30 a. m.

The big blue Darracq touring car and its occupants showed plainly the results of a hard and long trip. Tanned, tattered and grimy were both machine and men, and from



THE LA ROCHE PARTY AT THE HALF-WAY POINT; IN THE ST. LOUIS EXPOSITION GROUNDS.

the four corners of the seats, front and rear, flapped the remnants of four flags that had been more or less whipped into shreds by being rushed through the air. They suggested torn battle flags.

At the back of the car was a pennant showing the tricolor of France, which was presented to Mr. La Roche at St. Louis by the French Commissioner at the fair. On its sides were the banners reading, "St. Louis tour, A. A. A., No. 42."

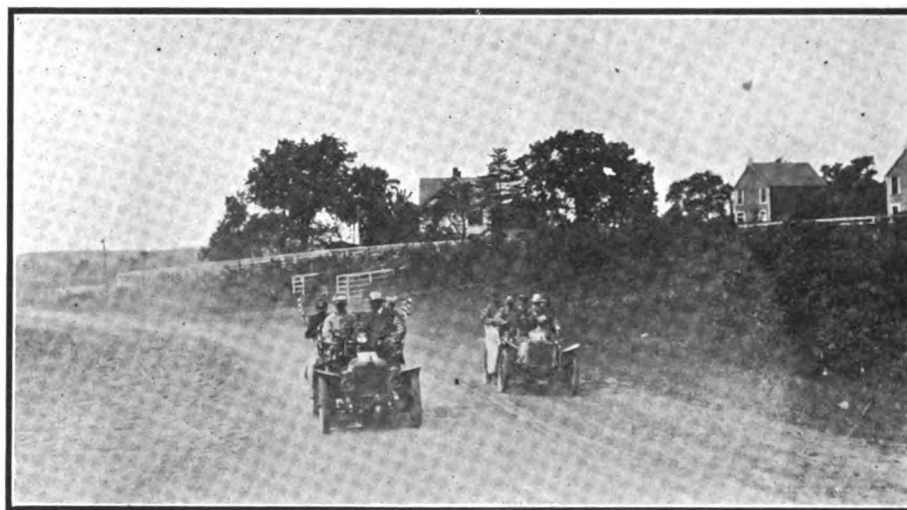
In general appearance the car, as well as the men, was a battle scarred veteran, although it was a new one when it started out. It was not without reason for the outfit to be honored as war worn veterans either, for they had been through a strenuous campaign. Mr. La Roche and his party and the car had been in collision with a trolley car, had been half buried in mud, lost at midnight in the mountains, had been held up by a highwayman, had been hanging half way over an unused cistern, and a bullet from a pistol, accidentally discharged, had passed through the trousers of two men and buried itself in the seat.

Sulphuric acid from the batteries had flown around and eaten holes in clothing and cushions, the mud guards of the car were twisted, the reach rod bent, the front springs braced in splints of wood and the tires looked as if they had been chewed.

Everybody seemed to recognize the party. The employees at the ferryhouse insisted on shaking hands, and a crowd outside the gates pressed about and cheered. Broadway was blocked, and the slow moving procession was warmly greeted all along the line. A stop in front of the Motor World offices was made and a big crowd gathered. At the Automobile Club of America another crowd was waiting, and Mr. La Roche was cheered loudly when he arrived there and finished his feat at the place from which he started.

It was about 11:40 o'clock in the morning when Mr. La Roche reached the Automobile Club. He waited until just 11:44 o'clock, and then stopped the engine. It was 9:44 o'clock on the morning of July 25 that Mr. La Roche started, so that the motor had been running continuously for fifteen days, plus two hours.

The trip out was made by way of Albany, Buffalo, Cleveland, Chicago and Bloomington, while the return was by way of Terre Haute, Indianapolis, Columbus, Pittsburg and Philadelphia. Mr. Mason was observer for Mr. La Roche, and Mr. Everett for Lieutenant Le Blanc, and made the shifts with them. Going out Mr. La Roche took a rest and travelled by train between Buffalo and Cleveland, and again between South Bend and Chicago. Lieutenant Le Blanc took a train from Cleveland to South Bend and from Chicago to Bloomington. St. Louis was reached at 12:13 a. m. on August 1, and a stop was made there until 4 a. m. on August 3. During this interval a special policeman and one observer were always with the car, and its radiator was treated to frequent douches of ice water. Returning, Lieutenant Le Blanc drove from St. Louis to Terre Haute, Mr. La Roche drove from Terre



EN ROUTE ACROSS STATEN ISLAND.

Haute to Wheeling, but remained in the car when relieved there and rode to Pittsburg, from where he took a train to York and then back to Chambersburg. Mr. La Roche's longest ride in the car was one of sixty-seven hours, from Terre Haute to Pittsburg.

The worst roads encountered were near Seneca Falls, on the outward trip, where the car sank so deeply into the mud that a trestle work of rails had to be built to extricate it. Fence rails again came in handy near Java, Ohio, when a disused and grass covered cistern was backed into. Near Chambersburg wrong roads were taken, and the car wandered far, eighty miles, finally getting back to the very place where the correct road had been departed from.

It was three miles this side of Toledo that a highwayman with a shotgun was encountered at night. He stopped the car by using a lantern and then levelled his gun and demanded money. While Mr. Mason parleyed, Mr. La Roche adjusted the second speed, and, throwing the clutch, made the car leap forward toward the robber. He

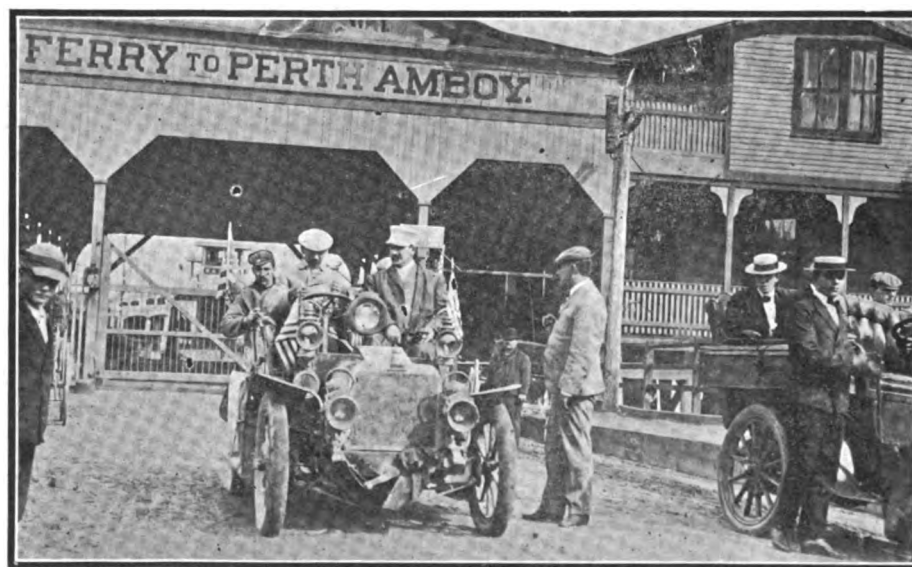
jumped aside and as soon as he could fired a shot, but it went wild.

The best previous record for a non-stop trip was that of D. M. Weigel, made over fine roads in England. He made a run of 2,017 miles early in July.

Oldfield Pleases at Toronto.

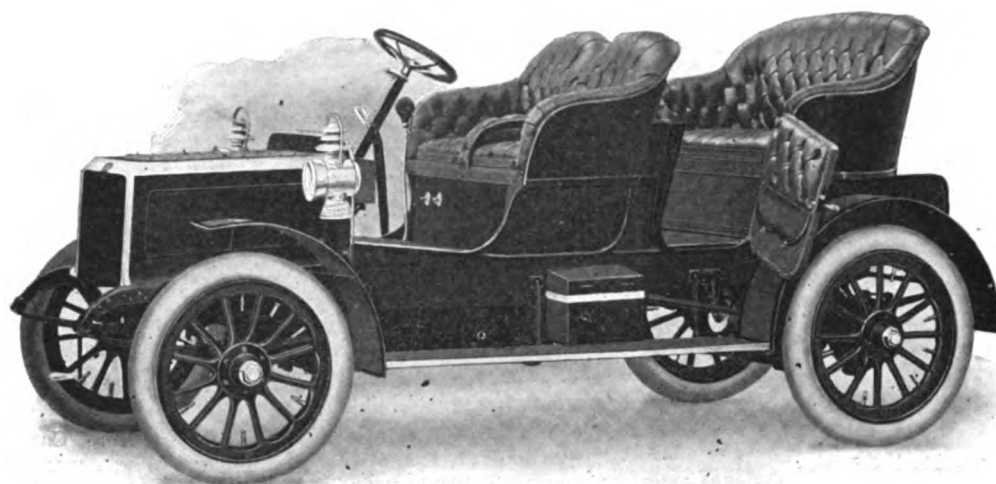
Five thousand Canucks held their breaths on Saturday, August 6, while they watched Barney Oldfield in his Peerless racer make ten circuits of a half-mile track in 6 minutes 54.5 seconds, and then gave him round after round of applause that must have stirred even the blasé Ohioan. The Exposition grounds at Toronto, Canada, were the scene of the going, the occasion being an open race meet promoted by the local motorists.

Oldfield made two time trials, one at three and the other at five miles. In the first he covered the distance in 3 minutes 57.25 seconds, the second mile being covered in 1.18. A burst tire interrupted a second trial, this time at five miles. It was repaired, however, and Oldfield then covered the distance in 6.54 4-5—good time for a half-mile track.



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RACES AT POUGHKEEPSIE

Agricultural Society Adopts Motor Car After Sixty Three Years—Fine Sport Promised.

Entry blanks for the races to be held at Poughkeepsie, N. Y., on September 16, in connection with the sixty-third annual fair of the Dutchess County Agricultural Society, reveal a programme of unusual attractiveness, one that should fill well and furnish fine sport. The plan of naming the races after the fashion of running horse events, has been adopted, and the names are apt

This meet is in the line of the fall circuit. The Syracuse races will be held in the week preceding those at Poughkeepsie, and races at New York will follow.

The freight rate for automobiles from Syracuse is \$35 for a carload. Single machines, crated, \$24.50; uncrated, \$28. Fair roads from Syracuse to Poughkeepsie; distance, 299 miles.

The freight rate from Buffalo to Poughkeepsie is \$39 for a carload. Single machines, crated, \$27.00; uncrated, \$31.20.

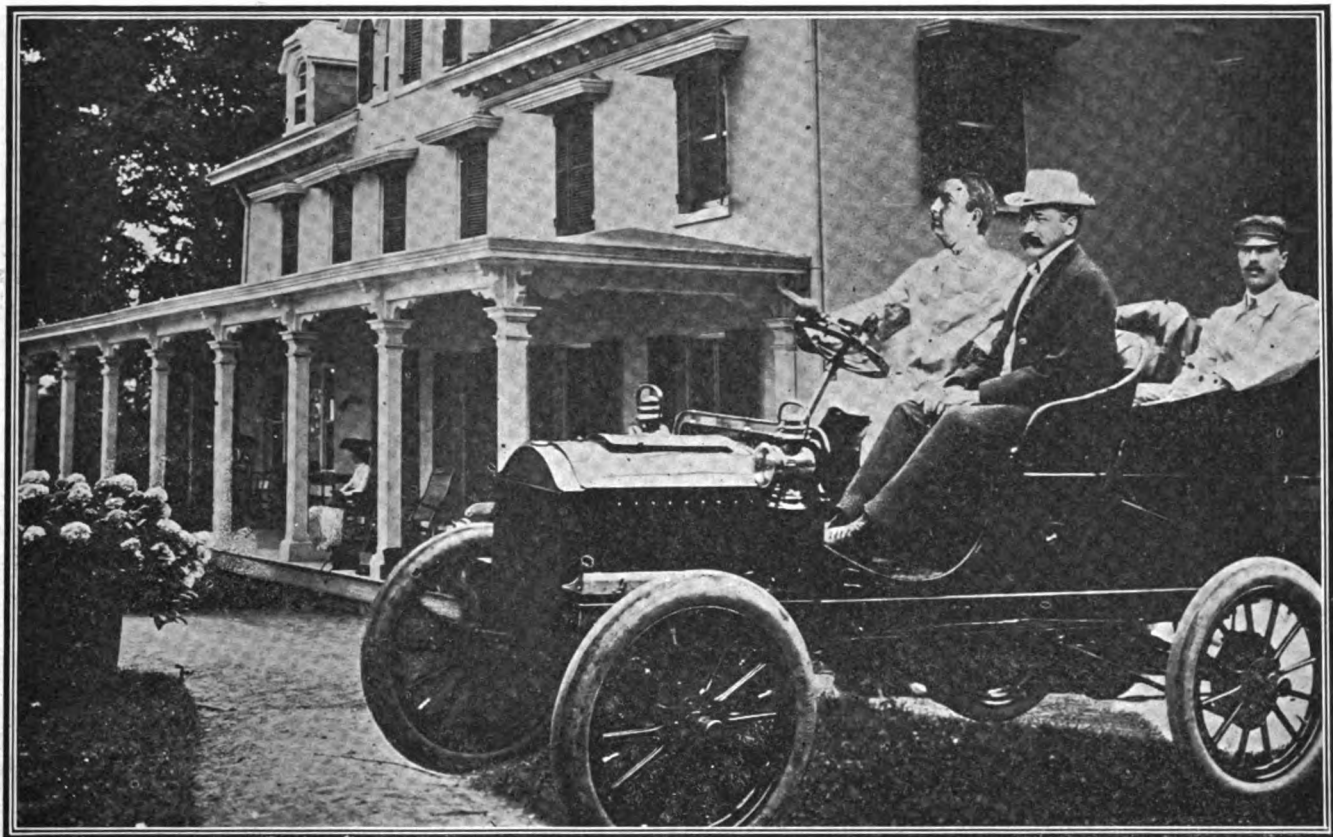
The freight rate from New York to Poughkeepsie, via Hudson River Railroad, is \$18 for a carload. Single machines, crated, \$12.60; uncrated, \$14.40. By Central Hud-

Event No. 4. The Grand Dutchess Handicap—Five miles, open to all; handicaps to be allowed in time. First prize, silver cup, value \$100. Second prize, silver cup, value \$50.

Event No. 5. Dutchess County Fair championships—Five-mile events, open to all machines driven by owners who have residences in Dutchess County, or in New York State within fifty miles of Poughkeepsie. Cars must be stock machines, in roadster condition; must be driven by owner and carry one person besides the driver.

(a) Championship for cars of Class 3 (551 to 881 pounds)—Five miles. Silver cup, value \$25, to winner.

(b) Championship for cars of Class 2 (881 to 1,432 pounds)—Five miles. Silver cup, value \$25, to winner.



(Copyright, Harry T. Clinton, Dobbs Ferry, N. Y.)

A PRESIDENTIAL CANDIDATE IN AN OLDSMOBILE—ALTON BROOKS PARKER AT HIS RESIDENCE, ROSEMONT, N. Y.

to the locality, which is in a district largely settled with wealthy residents, and said to be a field too little cultivated by the manufacturers. The entry blanks for this meet call attention to the fact that this one-mile track is really a fast and safe one. It is clayey and hard, and better banked than any of the horse tracks. It was, in fact, banked years ago for bicycle racing, and promises to be quite an acquisition to the automobile racing circuit.

A new feature on the entry blanks for this Poughkeepsie meet is that of printing on them the distance of the track from the principal large cities, and giving the cost of sending automobiles to the track by freight. From this list it can be quickly seen what a saving it will be for several manufacturers, or racing men, to club together and engage a car. The information given is as follows:

son Steamboat Co., from \$5 to \$10 per machine. Fine roads from New York; distance, 76 miles.

The freight rate from Boston to Poughkeepsie, via B. & A. and H. R. R. R., is \$30 for a carload. Single machines, crated, \$21; uncrated, \$24. Fine roads from Boston to track; distance, 226 miles.

The complete list of events for the races is:

Event No. 1. The Hudson—Five miles, for touring cars, Classes 2 and 3 (881 to 2,204 pounds); stock machines. First prize, silver cup, value \$75. Second prize, silver cup, value \$50.

Event No. 2. The Poughkeepsie Cup—Ten miles, free-for-all, for all classes, under American Automobile Association rules; any motor power; motorcycles barred. First prize, \$100 silver cup. Second prize, \$50 silver cup.

Event No. 3. The Catskill Chase—Pursuit race, Australian style (distance unlimited); a challenge event. Silver trophy, value \$100, to winner.

(c) Championship for cars of Class 1 (1,432 to 2,204 pounds)—Five miles. Silver cup, value \$25, to winner.

N. B.—Cars in events (a) and (b), if they have detachable tonneaus, may remove them and race as runabouts, but under no circumstances may any car be "stripped." Cars having non-detachable tonneaus must carry the full body.

(d) Grand championship—Five miles, open to winners in (a), (b) and (c), and also to the second car in the fastest of these events. Championship cup, value \$100, to winner.

Note.—In case the entries for the championships render preliminary heats necessary, they will be at one mile distances, and may be held in the forenoon of the race day.

Event No. 6. Record Trials.

Entries close September 12, with Arthur N. Jervis, Room 94, Tribune Building, New York City, who has been appointed by the Agricultural Society to superintend this feature of their fair.

NEW CUP RACE CONDITIONS

Automobile Club Begins Early and Takes Radical Means to Prevent Fizzles.

By announcing the conditions under which entries for the international cup race of 1905 will be received, the Automobile Club of America on Wednesday settled the fact that it is not ready to turn over the control of that affair to the national body, the American Automobile Association, to whom it of right belongs. Instead, the club starts out to do better by looking a long way ahead and preparing conditions calculated to prevent the eleventh hour entries and the presentation of hastily finished and untried cars so common in the past. The conditions, as announced, are as follows:

"All entries from the United States are required to be made through the Automobile Club of America, and will be received up to December 15, 1904.

"The Automobile Club of America is open to receive entries for the cup race upon the following conditions:

"1. Each entrant shall deposit with the club the sum of six hundred dollars.

"2. Each entrant shall file with the secretary of the club, on or before April 15, 1905, an affidavit, signed by two responsible persons, containing the following statements, based on their own knowledge:

(1) That the car has been completed for a period of over four weeks.

(2) That they have driven the car over one thousand miles on the road.

(3) That they have driven the car over two hundred and fifty miles without stopping the engine;

(4) That they have driven the car more than forty miles in less than sixty minutes on track or road.

"3. The racing committee of this club shall decide which of the entrants may compete in the cup race. This decision may be arrived at by a trial, a contest or otherwise, as the committee may provide. All cars shall be placed at the disposal of the committee on April 15 and thereafter until a decision is made.

"4. Each entrant who is not present with his car at the times and places appointed by the committee, or who refuses to undergo the tests or abide by the rules duly provided for all the candidates, shall thereby disqualify his car, shall be ineligible to enter the race for that year, and may, at the discretion of the committee, forfeit his entrance fee.

"5. Any entrant who is present with his car at the times and places appointed by the committee, and who complies with their instructions, but who is not nominated by the racing committee for the cup race, shall have his entrance fee returned to him.

"6. Entrants shall submit to the racing committee the names of the intended drivers of each car, and they must be approved by the committee.

"7. Any entrant who after being nominated for the cup race by the committee does not start shall forfeit his entrance fee of six hundred dollars.

"8. If three entrants are nominated to take part in the cup race, each entrant shall have two-thirds of his entrance fee (after deducting his proportion of the expenses incurred in holding the race) returned to him, provided he starts in the race.

"9. If two entrants are nominated, each of such entrants shall have one-half of his entrance fee (after deducting his proportion of the expenses incurred in holding the race) returned to him, provided he starts in the race.

"10. These rules are supplemental to the rules of the Gordon Bennett cup race; each entrant agrees to abide by them, as well as by the Gordon Bennett rules."

Illinois Law Void.

By refusing to indict, a grand jury of Chicago, Ill., has cast into the waste basket—so far as Chicago and Cook County are concerned—the State law prohibiting a greater speed than twelve miles an hour for automobiles. The inquisitors decided that convictions under the statute would be impossible, on the ground that it was class legislation.

The test came on the demand for the indictment of Ernest Fitzgerald, an automobile owner and chauffeur, who has won a reputation for obstinacy in fighting fines. Although arrested a dozen times, he invariably appealed each one except the last. In this he pleaded guilty when captured and arraigned before an Evanston justice. His object was to assure his being held to the grand jury that he might test the law.

The grand jury agreed with the opinion of Judge Haney that the law would not stand. This view followed an examination of the statute by Assistant State's Attorney Blair.

Liability of Garager.

An action calculated to define the liability of garage keepers for injuries caused by automobiles being taken out without their owners' consent, has been commenced in the Chicago Circuit Court.

Louis T. Roenitz has brought suit for \$1,000 damages against Godfrey Johnson, alleging that the latter permitted Roenitz's car to be taken from Johnson's garage, at 446 North Clark street, and used without authority. It is asserted in Roenitz's behalf that while the automobile was being used, as alleged, it was broken, and repairs cost about \$1,000.

A Non-Stop Run.

Charles Schmidt drove a Packard car one thousand miles without stopping the motor on the Grosse Point track, Detroit, last Saturday and Sunday. He covered the distance in 29 hours and 53 minutes, averaging thirty-three miles an hour. He began at 6:16 p. m. on Saturday and finished at 12:09 a. m. on Monday.

MOTOR CARS NOT BARRED

Need not Obey Signs to Leave Speedway on Coney Island Boulevard.

A chance to distinguish themselves as being alive to all interests of automobilists seems to have been missed by both the rival national bodies, and a "yellow journal" has done what any one could have easily accomplished without cost. This is the demonstration of the fact that the whole of the main driveway of the Coney Island Boulevard is open to automobilists, in spite of the signs that motor vehicles must take to the side road at the beginning of the mile and a quarter speedway for horses.

A representative of the New York American undertook to test the matter and stand by his legal rights. The party went in an Oldsmobile with a lawyer, prepared for trouble, and the story is told in the American in this way:

The test was made at 4:30 p. m., at the time when the speeders are supposed to be most numerous on the Speedway, but the boulevard was practically deserted. A few horse vehicles were slowly wending their way to and from Coney Island. There was not a speeding horse in sight, and the magnificent boulevard was almost deserted, but the sign at Twenty-second avenue read:

"Automobiles must turn into the traffic road on the right."

There was no policeman on duty at that point, and the machine continued on for more than half a mile before Mounted Policeman Charles Stokum, of the Park Squad, brought it to a stop on a signal.

"You will have to turn to the right," ordered the policeman.

"By what law?"

"By no law," admitted the policeman. "It is at the request of the Park Commissioner, who wants this road clear for carriages."

"Well, I believe I have a right to continue on this highway," insisted Mr. Lockwood, "and I shall do so unless prevented. I have no desire to break any law or to do anything disorderly, but I must stand by my right. Have you any orders to arrest me if I continue along here?"

"No," admitted the policeman. "I can only request you to leave the main road. If you do not, I cannot arrest you. In fact, my orders are to use moral suasion only. The orders come from Captain McNamara, of Prospect Park."

A visit was made to Captain McNamara at the Litchfield mansion, in Prospect Park. "What is the law in regard to the use of automobiles on the Speedway?" the captain was asked.

"None," he declared, decisively. "I have been here for eighteen years, and I have always told the commissioners there was no warrant for restricting the crown of the highway for any particular kind of pleasure vehicles. There is no law, no ordinance and not even any printed regulation of the Park Board to sustain any such restriction, and my orders to the policemen along the highway are to make no arrests for violation of the rule against motor machines."

PRIZES FOR PHOTOGRAPHERS

List of Useful Articles to be Won by Snap-shotters of Rambler Cars.

The entry blanks, rules and prize list for the photographic competition which is being promoted by Thomas B. Jeffery & Co., Kenosha, Wis., have been issued, and will prove of interest to both photographers and motorists. The lists close on September 15, at which time all pictures submitted must be in hand. Blanks can be procured from Jeffery & Co. direct or from their branches and agencies.

The prize list aggregates more than \$200 in value, and is as follows:

1. No. 76 Solar Motor Searchlight, complete with standard, separate generator fitted with 7-inch lens mirror reflector; value \$50.
2. No. 74 Solar Phare de Luxe Gas Headlight, with 5-inch lens mirror; value \$40.
3. No. 1 Phare Solar Gas Headlight; value \$35.
4. No. 2 Phare Solar Gas Headlight; value \$25.
5. One pair No. 41B Solar Triple Top Oil brass sidelights; value \$20.
6. One pair No. 56 Solar Junior triple top brass oil sidelights; value \$12.
7. One brass automobile horn, with bulb and long brass flexible tube; value \$12.50.
8. One No. 5a Solar brass tonneau tail lamp; value \$7.50.
9. One brass automobile hand horn; value \$5.
10. One No. 7a Solar oil tail lamp; value \$4.

Contestants may enter as many pictures as they wish. The awards will be based on the following rules:

First—All prints submitted for competition to become the absolute property of Thomas B. Jeffery & Co.

Second—No print to be less than 4x5.

Third—Every picture must contain a 1904 Rambler automobile.

Fourth—Every entry must consist of duplicate pictures, one a gelatin, the other a platinum or carbon print.

Fifth—Thomas B. Jeffery & Co. will be sole judges of the merits of the pictures, and the choice will be governed as follows: (1) artistic surroundings and pose; (2) thoroughness of detail and mechanical perfection of picture, and (3) its availability for reproduction.

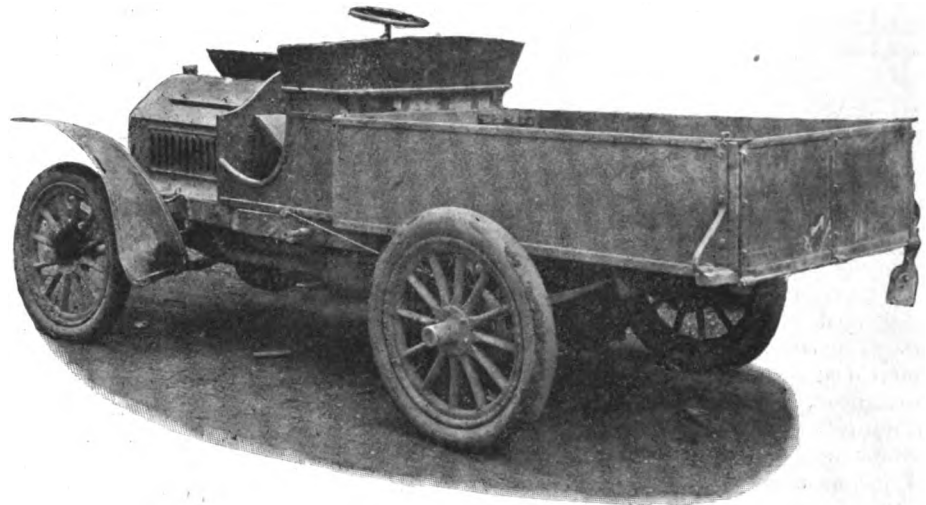
Tour Through a Tire Factory.

Almost like a "personally conducted" tour through a modern tire factory is a perusal of the well printed and finely illustrated pamphlet, "The Home of the G & J Tire," which the G & J Tire Co. have issued and are sending to those interested. Beginning with the arrival at the factory of the rubber "biscuits"—one valued at \$96.05 is illustrated—the progress of the raw material is traced step

by step through the various processes, with painstaking minuteness. The drying room, where summer temperature is constantly maintained; the mixing mills, the calendars, vulcanizers, press room, etc.; the various processes through which the fabric passes, and the extremely interesting methods of building these two materials up into the completed tire—all are set forth in a graphic way that leaves little to the imagination.

A Royal Time-Tested Truck.

The day is not far distant when it will be an incongruity for an automobile maker or dealer to use anything but a motor vehicle for the transport of either goods or passengers. The entire reliability of the automobile is being increasingly evidenced. The truck here shown is an illustration of it. It is a Royal Tourist, Model O type, having two cylinders and made by the Royal Motor Car Co. About four months ago it was converted



A ROYAL TRUCK THAT HAS BEEN RUN 12,000 MILES.

into a truck for factory use. Since then it has been run something over 12,000 miles, and to-day has the same motor, transmission, drive and, in fact, every mechanical feature as when it was first put out last summer.

Objects to Repair Shop "Vibrations."

A peculiar action is before the Ohio courts. Mrs. Irene Thomas, of Cleveland, brought suit for an injunction to stop the noise and "vibrations" which she claims are emitted from an automobile repair shop next door to her home. H. S. Moore is the defendant in the suit. The courts are asked to enjoin him from committing the alleged nuisance and to pay \$1,000 for damages, which, the plaintiff says, she has already sustained.

France Buys Oldsmobiles Freely.

Henry Fournier is authority for the statement that the sale of American automobiles is rapidly increasing in Paris, and cites in support of this statement the fact that this season, up to the beginning of July, one Paris agency had sold eighty-seven Oldsmobiles.

PAY THEIR OWN FINES

Novel and Effective Method Pursued to Prevent Pope Testers from Scorching.

To properly test a new car, it is necessary to put it through its paces in a pretty thorough manner, regard being had for speed as well as power. Speed ordinances are well-nigh universal now, and how not to fracture them is sometimes a problem where factory testers are in question.

One company that never has any trouble about it, however, is the Pope Mfg. Co., and this notwithstanding that they employ a corps of thirty-two testers or demonstrators at Hartford, who are steadily employed in testing and trying out Pope-Hartford cars. The tests are made at legal rates of speed.

Signs are displayed all over the factory cautioning drivers against exceeding the speed limit. Those drivers who do so pay their own fines. Colonel Pope believes in obeying the law strictly, and will not stand for anything but legal rates of speed. Several of his demonstrators have been arrested, and each has had to pay \$25 for the fun, so all are more careful now.

Howell Likes "Yellow Boys."

"The glint of yellow on the bills always makes me feel good," exclaimed Manager Howell of the local Oldsmobile store to a Motor World man one day last week. A customer had just counted over to him four crisp new "yellow boys" of the denomination of \$100 each, together with some smaller bills and a \$20 gold piece, all in payment of a second-hand Oldsmobile.

"It is so different from the dull hue of ordinary bills," he went on. "They are commonplace. But when I finger the yellow ones I know that I have been doing some business worth while."

1905 CLIMB TO THE CLOUDS

Course May be Changed and Contest Conducted on Another White Mountain Grade.

Already plans are being made for repeating the White Mountains hill climbing contest in 1905. W. J. Morgan, who is the generalissimo of Anderson & Price, the hotel keepers who financed the affair, stated to a Motor World man this week that there was a strong probability that the course would be changed, and, instead of ascending Mt. Washington, a climb up one of the other mountains would be made.

Several reasons have led to the disfavor with which Mt. Washington itself is viewed. There is, first, the danger, which is ever imminent. The chances of accident are great at any time, so rough is the road, so abrupt the turns and so close the bottomless abysses which confront the driver at every turn. To these perils is added that of sudden storms. Even in the middle of summer these are liable to occur. Their awful severity is difficult to conceive. The one in which William B. Curtis lost his life a couple of years ago will be readily recalled, and was typical of the region. Vehicles on the mountain road at such a time would almost certain be swept off into the depths below.

Other factors which militate against the road are the necessity for obtaining permission for its use by automobiles, and the stiff price charged for each car making the ascent. The latter is nearly \$4 each, and the total makes a very respectable sum. The road itself, the Mt. Washington Summit Road, as it is termed, is closed to automobiles throughout the season. The ban was raised for one week only—that of July 16-16—and then only with considerable difficulty. During the rest of the year the road is limited to the exclusive use of carriages, as coaching tours to the summit have long been one of the most interesting features of that part of the country.

August Meet for Spring Lake.

Spring Lake, N. J., is one of the steadily increasing number of seashore resorts which think they possess the ideal course for automobile racing. As a result a race meet is announced to take place on August 19, in connection with its week's carnival of outdoor sport. The races will be straightaway and run over a mile and a half stretch on the Ocean Drive, a very wide, level boulevard skirting the sea.

Loren R. Johnston, manager of the Essex and Sussex Hotel, at Spring Lake, is chairman of the committee having the matter in charge.

The total expenditure in connection with the Bennett cup race at Homburg, Germany, last month is stated to amount to \$72,500. The receipts were 180,700 marks, thus making the total deficit more than 100,000 marks, presumably to the debit of the Automobile Club of Germany.

Two Day's Racing at Minneapolis.

Minneapolis will have two days of automobile racing at the Hamline track on August 17 and 18, when the joint horse and automobile meet will take place. An extensive programme has been arranged, and the prizes are said to be both ornate and expensive. The events follow:

WEDNESDAY, AUGUST 17.

No. 1. Minneapolis Automobile Derby; five-mile dash; flying start. Open to all machines 40 horsepower and under.

No. 2. One-mile dash; flying start. Open

No. 3. Two-mile dash; flying start. Open to all machines 12 horsepower or under.

No. 4. Two-mile dash; flying start. Open to all machines 16 horsepower or under.

No. 5. Five-mile dash; flying start. Open to all machines 90 horsepower or under.

THURSDAY, AUGUST 18.

No. 1. Challenge race, St. Paul vs. Minneapolis. Open to all machines 40 horsepower or under.

No. 2. Three-mile dash; flying start. Open to all machines 20 horsepower or under.

No. 3. Touring car race; ten-mile dash. Machines must carry three passengers or more, each passenger weighing not less than 130 pounds; with full touring car equipment. Open to all machines 30 horsepower or under.

No. 4. Two-mile heat race. Open to all machines 90 horsepower or under.

No. 5. Three-mile dash; flying start. Open to all machines 24 horsepower or under.

No. 6. Sweepstakes; one-mile dash; flying start. Open to all machines. Trial for track record.

The track is a mile circuit, and will be put in first class condition. The events will begin at 2 o'clock each afternoon. R. F. Jones, who has the management of the meet, reports a great deal of local interest, and also has assurances of a number of out-of-town entries.

Schultz Wins at Knoxville.

Knoxville (Tenn.) motorists made a gala day of July 30. They formed in line at the courthouse, on Main ave., in the afternoon, and paraded through the principal streets, which were thronged with onlookers, and then drove out to the local race track, where a number of interesting contests were held. A dry track, with its resultant clouds of dust, detracted from the spectators' pleasure, but they seemed to enjoy themselves, notwithstanding.

The first race, one mile, was won by Edward Schultz in a Cadillac, in 2:05. Henry Howland was second, also in a Cadillac, and Cowan Rodgers, driving an Oldsmobile, was third.

Schultz also captured the second race, his time being 2:15.

The third event was a gentleman's road race, and W. J. Oliver's model "B" Cadillac proved to be the fastest machine.

A Cadillac, driven by Henry Howard, broke the half-mile record of the track. The distance was covered in 59 seconds.

GOOD CROWD; POOR RACING

Meet at Mormon Capital Drew Better than Churches, but Was Uninteresting.

Automobile racing proved a better drawing card than the church services at Salt Lake City, Utah, on July 31. A crowd estimated at four thousand people gathered at Calder's Park to witness the race meet, run under the management of Orlando Stevens, the ex-bicycle racing man. They were ill paid, however, as the racing was of a mediocre character, and marred by many failures of machines to work.

Bert Fuller attempted to lower the world's mile record, but failed to do so. Driving a 35-horsepower Pope-Toledo automobile, he covered a mile in 1:29. The track had just been sprinkled, and it was almost impossible to hold the rail, thereby losing precious seconds.

The five-mile event, for cars of the 1,250-pound class, was won by Grange, of Ogden. L. H. Murdock, of the Junction City, came second; George Lewis got third and Earl Staley fourth. The time was 9:14.

The three-mile race for Winton cars was taken easily by H. Sanders. Fuller's machine acted badly, and he had no chance at all to beat Sanders, who won as he pleased. Time, 5:25.

The three-cornered motorcycle race was captured by Earl Staley. J. P. Gunn and John Chapman were the other competitors. While running the first mile there was a collision between Chapman and Gunn, and the latter was so badly cut up and bruised that he was forced to drop out of the race. Chapman was also hurt, but continued in the race. He was distanced, however, by Staley, who won the contest. The time was 3:45.

The obstacle race was captured by George Lewis after an exciting contest with himself. He was the only entry, the others being afraid to take a chance at dodging between chairs, tables, etc.

Providence Meet September 10.

It has been definitely settled that the fourth annual race meet of the Rhode Island Automobile Club will be held at Narragansett Park, Providence, R. I., on Saturday afternoon, September 10. The event has been under discussion for the past two weeks, the preliminary arrangements having been left in the hands of the runs and tours committee, headed by R. Lincoln Lippitt, who has finally secured the track for the date most desired by the club.

Tradesmen Barred from this Meet.

A decided novelty in race meets is to be held at the Overland Park track, Denver, Col., on August 27. It is promoted by the Colorado Automobile Club, and is only to private owners; and dealers and other tradesmen will be barred.

AUTO 'BUSES FOR DENMARK

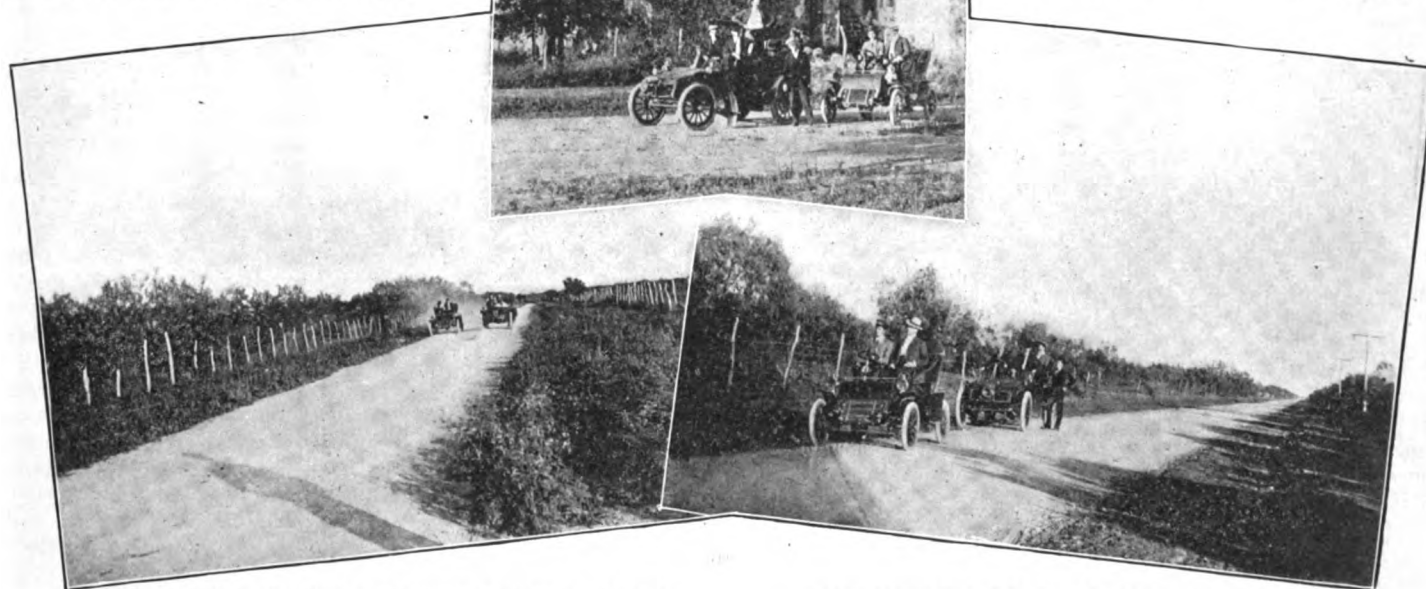
Service to be Installed to Carry Mails—Conditions of Purchase Severe.

In a recent report of the Department of State at Washington Raymond R. Frazier, the United States Consul at Copenhagen, says that the Danish government has of late entered into a ten-year contract with a local company for the delivery of mails over the stage routes in Denmark proper. This company proposes, with the consent of the Postoffice Department and under its supervision, to install automobile coaches in place of horse drawn vehicles. This is an important branch of the postal service, since there are so many small islands without railways. The passenger and freight traffic makes many of the routes quite profitable.

Four automobile omnibuses of French and, probably, German and Scotch manufacture will be given a three months' trial, beginning with September of this year. It is confidently expected that the experiment will be successful, and, if so, that there will be a large demand during the next two or three years for automobiles of the omnibus type.

salary of the driver, will furnish gasoline and oil and provide housing for the car. The commission will pay one-third the price of the car on ordering it, one-third on its delivery in Copenhagen and one-third at the end of three months' trial, if it is found satisfactory. The trials are to be conducted under the supervision of the Postoffice Department, and from their decision there is no appeal. The car must accommodate sixteen persons, including the driver, and be capable of carry-

SAN JOSE (TEXAS) MISSION, BUILT 1718.



A FRIENDLY BRUSH ON THE CORPUS CHRISTI (TEX.) ROAD.

THE MEDINA ROAD, AN IDEAL TEXAS HIGHWAY.

The following are the rather severe conditions to be met before any particular make of automobile will be purchased: The body of the car (exclusive of machinery) must be approved by the commission. The machine must be run 2,000 kilometres (1,243 miles) after coming from the factory, at the maker's expense, an inspector appointed by the commission being on board all the distance. The car is then to be taken apart and each part carefully inspected, cleaned and readjusted, and the car is to be run for three days at expense of maker. The car will then be forwarded to Copenhagen and run for three months by a driver furnished by the maker, who shall be accompanied by an agent of the commission. The commission will pay the

ing one ton of freight besides, at an average speed of twelve miles an hour on a 9 per cent grade. The commission has practically determined to try the "Schneider-Creuzot" French omnibus, a car with a quadruple gasoline cylinder of 24 horsepower, costing \$3,600, and accommodating twelve passengers inside and three on the platform. This car is at present most in favor with the commission.

The commission is desirous of interesting American manufacturers of omnibus automobiles.

Motorists may have to negotiate the traffic congested streets of Oklahoma City at the rate of six miles an hour, or four at crossings. An ordinance fixing the speed of all vehicles at this rate has been introduced in the Council.

COMMISSION COMMENDS AUTOS

Danes Find Motor Vehicles Superior to Railways for Carrying Mails and Passengers.

As the result of an investigation conducted by the Danish government, the superiority of the automobile as a carrier of passengers and mails over routes where steam railroads do not exist is acknowledged. This recognition is to be followed by the introduction of automobile 'bus lines in many parts of Denmark, some of them to be established at once.

This action has grown out of the appointment of an automobile commission which was sent abroad by the Danish government on a tour of inspection with a view to reporting as to the adaptability of the automobile for short route mail service. The commission is composed of officials from the postoffice and other governmental departments and engineers appointed by the government.

The members of the commission visited a large number of places in North and Central Germany, France and England. The object of the commission was to investigate to what degree the automobile might be made a substitute for secondary railways. From what they have learned it was evident to the com-

mission that the automobile offers the best of service in places where the modern machine has been employed in the public service. The automobile reaches its destination on time, and has advantages over the railway train, which often in foreign countries, especially in England, fails to arrive on schedule time.

If speed were not a consideration, it was evident to the commission that it would not be advisable to replace the present stage service with automobiles. On the other hand, if quicker delivery is the main object, the automobile will best meet the requirement. It is the intention in Denmark, possibly, to replace the day coaches (stage service) by automobiles. It will be required that the automobiles have a speed of about twelve miles an hour on the average, which is about the speed maintained by the public mail service in foreign countries.

Autos for Chinese Royalty.

When the story went the rounds several months ago that a number of automobiles had been purchased for the Empress of China and other royal personages it was received with some incredulity. It appears, however, that the tale was really true, and that, moreover, it was understated in the telling. The order was given to a German firm, and was for fifteen automobiles for the use of China's imperial court.

These vehicles have now been delivered and are in regular use; they were built by the Berliner Motorenfabrik at Tempelhof, near Berlin, and were taken to China and placed in service there by Herr E. Valentin, an engineer of the company, who has lately returned from his trip.

Three of the vehicles ordered are for the use, respectively, of the Empress, the Emperor and the princes, and are luxuriously furnished and finished in the imperial yellow, with the Chinese insignia, the dragon and sun, affixed in all possible places. These vehicles are each fitted with a rotatable cushion seat. The other twelve are for the use of the court servants, etc., and are built as fourteen passenger omnibuses and painted a deep red. The cars were disassembled and sent by rail securely packed in very strongly made cases. The trip from Berlin to Tien-Tsin took twenty days, of which fourteen were spent on the Siberian express train. The cases were transported to Tien-Tsin from the terminal of the Trans-Siberian line by steamer, and even before their arrival Herr Valentin had erected sheds for assembling the vehicles, which served later as garages for the cars and residence for the drivers. The next thing to receive attention was the instruction to the Chinese workmen. When the cases finally arrived the ship captain declared that with his small cranes he could only undertake to unload them at the risk of the owners, to which Herr Valentin was obliged to consent. Next the coolies refused to move the cases, claiming that they were too heavy to handle; but promise of a handsome allowance made the impossible possible, and one hundred and fifty men, with their primitive appliances, successfully accomplished the transport of the cases to the garage. The unpacking of the cases was also a matter of some difficulty; but now began the assembling of the vehicles, a task of no small difficulty.

The work was yet far from completion when one day Viceroy Yuan-tut-chikai sent word to Herr Valentin that he intended to make a trial trip the next morning at 10 o'clock. There was only an interval of eighteen hours left, and as non-compliance with the viceregal demand might have led to serious consequences, the work of assembling was forced with all possible haste, and by 9 o'clock the vehicle was in running order. The Viceroy was fully satisfied with his trip, though at first he had a horse drawn vehicle following the motor car until he had convinced himself of its reliability. The training of the men who are to drive and take

care of the cars was carried out very successfully, and the final delivery of the vehicles in Peking passed off without a hitch.

Turnpike Company Reduces Toll.

A notable victory has been won by the Pennsylvania motorists who have been up in arms against the outrageous toll charges made by a number of the turnpike companies of that State.

The equity suit instituted by ex-Burgess C. W. Wainwright, an automobile owner, against the Springhouse & Sumneytown Turnpike Co., ended at Norristown, Pa., last week in a compromise, the complainant agreeing to withdraw the suit and the turnpike company agreeing to reduce the rate of toll of one seated automobiles to two cents a mile and for two seated to three cents a mile.

The disposal of the case is regarded by the plaintiff as a decided victory, and the combination of automobile owners formed to fight excessive tolls are jubilant over the settlement.

The company had been charging 95 cents to travel seventeen miles, in some stretches of the road the rate being as high as 13 cents for three-quarters of a mile. The company resisted the equity proceedings brought to prevent collection of excessive tolls, claiming that the complainant had adequate remedy at law by proceeding against the company in Common Pleas Court and recovering the fines provided by the charter. This plan would have been adopted in case of an adverse decision by the Court on the equity proceedings. Both sides readily agreed to a compromise.

Since this suit was brought the directors of the Harleysville & Lederachsville Turnpike Co. have decided to reduce the toll on automobiles. Heretofore they had charged 25 cents for the round trip on the pike. The price now is 10 cents.

A person close to the management of the Springhouse & Sumneytown Turnpike Co. said, so far as he knew, the turnpike company is not disposed to act vindictively toward automobile owners. The turnpike company will give the vehicles all the liberty possible, but should this privilege grow into an abuse and divert team travel from that highway measures will be taken to prevent automobiles exceeding the speed limit set by the State law.

Charge Toll per Horsepower.

"In days of old" robber barons and their more lowly imitators took possession of the highways and levied toll on all who had to use them. Fit successors of the predatory barons are many toll companies of to-day. The Alexandria Pike Co., of Newport, Ky., is a shining example. It has placed in effect a prohibitive tax which will practically banish automobiles from Alexandria Pike, one of the prettiest driveways in the State. A toll of one cent a mile for each horsepower of the machine is charged. The pretext for this high handed action is that it was taken owing to the numerous runaways.

Says Tire is Auto's Weak Point.

Mr. Henry Farman, the famous French motorist, has announced his retirement from the racing field. His lack of success in the Ardennes circuit race a few weeks ago, when tire troubles deprived him of all chances of winning, is the cause of this retreat.

"You see," he is quoted as saying, "there is nothing more to be done. We get our automobiles and we bring them into such a condition that they may be said to be perfect. We train on them until we know them like human beings; we risk our necks in a 500-kilometre run, and all the while we are dependent on the tires. Until something more resisting is produced than the 'pneu,' these courses will continue to be won or lost by luck.

"The finest motor is useless if the wheels that carry it are not suitably padded against the shocks of the roadway. We cannot always have a racing track to run on, nor is it well that we should, but no tire has yet been produced that can travel on any other surface, at the gigantic speeds now possible, for any appreciable distance without giving way."

M. Farman's brother, Maurice Farman, retired after the ill-fated Paris-Madrid race last year.

Pottgieser's Opinion of Autos.

Hurrah for Pottgieser! He is "agin" automobiles, and he doesn't hesitate to say so. "They are uncontrollable and dangerous," declares Pottgieser. "Only the rich can afford them, and they should be compelled to pay a good tax upon them."

Incidentally, Pottgieser, who happens to be County Commissioner of Ramsay County, Minn., is not only resisting the efforts of motorists to have the assessment on automobiles reduced, but he wants to boost it higher yet. He has announced that he will attempt to secure a general raise in the assessed valuation of automobiles at an early meeting of the board of equalization, of which body he is a member. The automobiles in the city have been assessed by Assessor Conley at about the same proportion of their actual value as is all personal property.

Adjusting Ball Bearing Wheels.

When in doubt as to the number of balls that should be used in a ball bearing wheel, one less should be put in than the total possible number which can be squeezed into the cup. When jacked up and screwed tight, the wheel should revolve quite freely; in fact, as freely as possible, provided there is no lateral "play." If a cone shows a tendency to work loose it is best to provide a stout iron washer fitting up to the pin; this should be the strongest that can be used.

Daily automobile service will be established between several of the towns in the northern part of New Mexico. A line will also be put into operation daily in the near future between Farmington, N. M., and Durango, Col. The round trip is 110 miles, and the distance will be covered in twelve hours.

The Week's Patents.

765,292. Driving Connection for Motor Trucks. Ralph L. Morgan, Worcester, Mass. Filed November 14, 1902. Serial No. 131,316. (No model.)

Claim.—1. In a motor truck the combination of the engine crank shaft, an inclosing casing, a capstan shaft extending through the casing and having capstan heads thereon, and boxes for supporting the capstan shaft and casing having ball-and-socket connection with the truck frame.

765,445. Variable Speed Mechanism. Henry L. F. Trebert, Rochester, N. Y. Filed July 16, 1903. Serial No. 165,837. (No model.)

Claim.—1. The combination with a driving shaft, of two gears independently revoluble upon said shaft; a driven member, so connected with one of said gears as to be revoluble therewith; means adapted to hold the other of said gears against rotation; means for locking said last-mentioned gear to said driving shaft so that it revolves therewith; gearing connections between said gears, and a support revoluble with said shaft, adapted to revolubly support said gearing connections, whereby said driven member may revolve independently of said driving shaft, or be driven at either the speed of the driving shaft or a lower speed.

765,564. Variable Speed Gear. Augustus C. F. Dann, Southsea, England. Filed August 29, 1903. Serial No. 171,180. (No model.)

Claim.—1. In a continuously variable speed gear, a rocking link, a driving crank arranged to oscillate the link, a block mount-

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FOR SALE—As good as new Waverly Electric Automobile. DR. E. M. OUTLAND, 547 Newton Claypool Bld., Indianapolis, Ind.

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FOR SALE—1904 Model Haynes-Apperson Two Passenger Light Touring Car with Top and Tonneau. Cost \$1,500, will sell for \$1,000. Car was received from the factory on June 20th and has been used but very little and in the very best of condition. The reason for selling is that the owner desires to purchase a 24 H. P. machine. This is a bargain. Address, L. L. CRAWFORD, Broadway, Uniontown, Pa.

\$195—Locomotive Steam Runabout; perfect order; first check gets it. CHUBBUCK, 20 Rutherford St., Binghamton, N. Y.

FOR SALE—16 H. P. Peerless car with top; fine condition; half price on account of absence. JAMES CLENNY, Kansas City, Mo.

PACKARD, Model F, extra tires and parts, in good condition. Correspondence solicited. E. E. DAVIS, Northampton, Mass.

\$3500 Peerless 1903 touring car in perfect condition; top, baskets, 5 lamps, new tires, etc. On account of leaving will sell quick for \$1500. A Snap for livery purposes. JAMES CLENNY, 1010 Grand Ave., Kansas City, Mo.

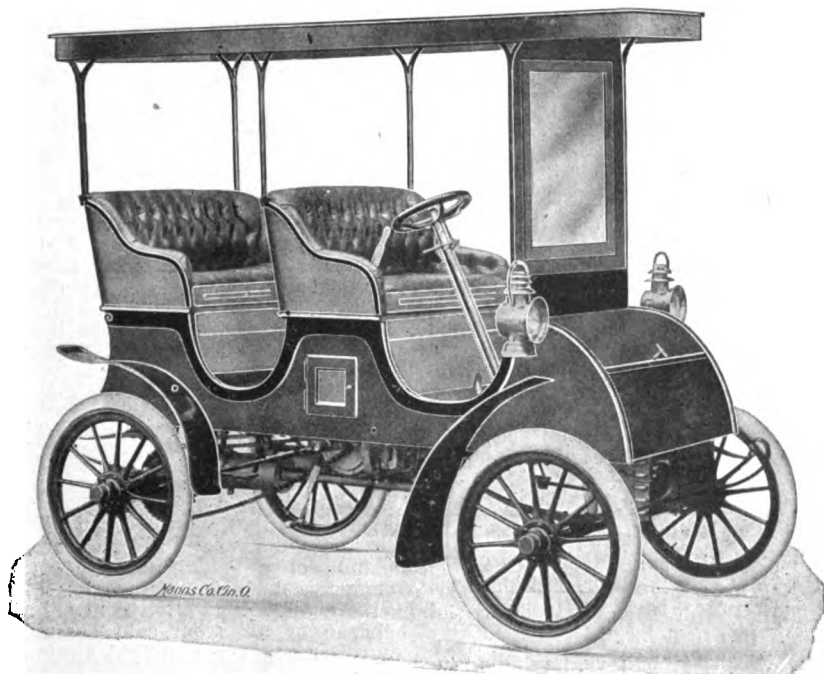
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ed to slide in the rocking link, means for adjusting the position of the block in the link in a continuous manner, an intermediate shaft, a crank on said intermediate shaft, a connecting rod coupling the said crank to the said block, a bevel pinion fixed on one end of the intermediate shaft, a second shaft, a pair of bevel wheels loosely mounted thereon and intermeshing one on either side with the said bevel pinion, and clutches fixed to each bevel wheel, and arranged to rotate the second shaft in one direction only; substantially as described.

765,628. Safety Mechanism for Starting Explosive Engines. Jonathan D. Maxwell, Detroit, Mich. Filed January 15, 1903. Serial No. 139,108. (No model.)

Claim.—The combination with the motor and its spark-controlling mechanism for manually advancing or retarding the spark, of the counter shaft B, the handle C thereon, the tension rod K and tension spring J eccentrically connected to the counter shaft; the shaft O, the disks S, the crank P on said shaft, the rod connected with said crank, a circuit closer connected with said rod, the chain-and-ratchet drive connection connecting the counter shaft with the main shaft of the motor, and the forked crank T upon the actuating shaft of the spark controlling mechanism co-operating with the tension rod to automatically move the spark controlling mechanism into prescribed position for starting the motor.

765,670. Double-Tube Pneumatic Tire. Arthur H. Marks, Akron, Ohio, assignor to the Diamond Rubber Company, Akron, Ohio, a corporation of West Virginia. Filed March 3, 1904. Serial No. 196,377. (No model.)

Claim.—1. A stay bolt for a clincher tire, consisting of a metal plate having outwardly diverging sides, and a threaded stem fixed to the base of said plate, said metal plate having a rubber cover vulcanized thereon.

765,707. Change Speed Gear for Motor Carriages. Eugene Mathieu Louvain, Belgium. Filed April 29, 1902. Serial No. 105,174. (No model.)

Claim.—1. In a change speed gear in combination a case, two shafts mounted in said case, toothed wheels keyed upon one of the said shafts and toothed wheels adapted to be moved along the second shaft, rods for moving the said toothed wheels along the second shaft, cranks acting on the said rods in forks provided at the ends of these rods, and a locking bar acting in the same forks as the cranks, and adapted to lock the actuating rods or one of these rods, according to the position of the cranks, substantially as set forth.

765,709. Exhaust Muffler. Willis J. Perkins, Grand Rapids, Mich. Filed March 13, 1903. Serial No. 147,690. (No model.)

Claim.—1. In a muffler, a case, a horizontal foraminous diaphragm in the case, said case having an inlet opening and an outlet opening for the exhaust, and above the diaphragm an imperforate partition between said openings, a pipe to supply water to the case, and an overflow opening in the case and above the diaphragm to maintain water above both the lower edge of the said partition and the diaphragm.

765,777. Rotary Explosive Motor. James F. Hathaway, San Francisco, Cal., assignor by direct mesne assignments, to Hathaway Rotary Engine Co., San Francisco, Cal., a corporation of California. Filed June 10, 1903. Serial No. 160,833. (No model.)

Claim.—1. An explosive motor comprising

a series of cylinders, a series of pistons working successively through the cylinders, devices actuated by the movement of the pistons to close the end of the cylinders as the pistons enter therein, a power shaft driven by the movement of the pistons, means for feeding an explosive mixture into the cylinder back of the moving pistons, and devices actuated during the travel of the piston for locking the cylinder closing devices and firing the explosive charge fed into the cylinders.

765,835. Spring Tire. Ludwig Herz, Feucht, near Nuremberg, Germany. Filed February 24, 1903. Serial No. 144,822. (No model.)

Claim.—In a spring tire, the combination of a felly, a series of helical springs extending radially from said felly, a rim formed of sectional hinged plates, lugs struck up from said plates and taking into the outer extremities of said springs and an elastic tire proper engaging said plates, substantially as described.

765,955. Running Gear. William H. Birdsell, Utica, N. Y., assignor to A. Vedder Brower, Utica, N. Y. Filed March 2, 1903. Serial No. 145,623. (No model.)

Claim.—1. In a vehicle running gear, in combination with the wheels and the front and rear axles, spring boards connected to the front and rear axles, respectively, and extending inwardly from the axles, resilient members connecting said spring boards, and a supporting frame carried by said resilient members, the inner ends of said spring boards being elastically supported from said frame.

766,191. Motor Vehicle. John W. Moakler, New York, N. Y. Filed September 24, 1903. Serial No. 174,397. (No model.)

Claim.—1. In a motor vehicle, the combination with vehicle wheels, and means for driving the same, of power transmitting means for transmitting power from said driving means to each wheel independently of the other, braking means, and a single operating device arranged to free one or both of said wheels and to operate said braking means at will.

766,194. Apparatus for Use in the Manufacture of Wheel Tire Covers. Frederick S. Ornstein, Kensington, Victoria, Australia. Filed February 24, 1903. Renewed April 5, 1904. Serial No. 201,743. (No model.)

Claim.—1. Apparatus to be used in the manufacture of wheel tire covers—comprising, in combination, annular box, a series of presser plates around the inside of said box with adjacent bevel edges, wedges for insertion between the said presser plates, cone or tapered block for actuating the presser plates and the wedges into and out of the gaps between the presser plates, and means for withdrawing the presser plates and wedges from the annular box to allow of insertion and withdrawal of tire cover, substantially as and for the purposes described.

766,216. Storage Battery. Frank T. Cable, New Suffolk, and Grant E. Edgar, Greenport, N. Y., assignors to Electric Boat Co., a corporation of New Jersey. Filed February 26, 1903. Renewed December 19, 1903. Serial No. 185,900. (No model.)

Claim.—1. A storage battery, having an inner tank containing the cells, covers for the cells, an outer tank, a cover on the outer tank elevated above the cell covers, thus providing a space over the cells, and an inlet and outlet to said space for maintaining a current of air over the cells.

766,218. Vehicle Controlling Mechanism.

James A. Charter, Chicago, Ill. Filed June 18, 1903. Serial No. 162,022. (No model.)

Claim.—1. In a vehicle driving mechanism the combination of a motor, a braking device, a gear clutch mechanism, and a supplementary mechanism attached to the gear and the brake operating mechanisms, and means connected thereto to reduce the power of the motor automatically when the gearing is thrown out, when the gearing is reversed and when the brake mechanism is applied.

766,226. Running Gear for Vehicles. William Dieter, New York, N. Y. Filed September 17, 1903. Serial No. 173,408. (No model.)

Claim.—1. In a running-gear for vehicles, a spring-reach comprising a plurality of independent springs arranged one above the other, means whereby a vehicle-body may be attached thereto, and means connecting the opposite ends of said springs to the front and rear axles comprising a shackle-plate, a pivotal connection between each plate and its axle, having its axis at right angles to the axle, yokes on said plate concentric with said pivotal connection, and means whereby the adjacent ends of said superposed springs are respectively connected each to one of said yokes.

766,410. Motor. Marshall Alger, Wheeling, W. Va. Filed November 19, 1903. Serial No. 181,871. (No model.)

Claim.—1. In a motor, oppositely-disposed cylinders having flanged heads, a balance-wheel having a hub portion supported by said heads, an antifriction-roller carried by said hub, pistons disposed in the cylinders, and a cylinder connected to the pistons, said cylinder having a winding groove for the reception of the antifriction-roller.

766,414. Motor-Vehicle. Léon Bollée, Le Mans, France. Filed August 3, 1903. Serial No. 168,005. (No model.)

Claim.—1. In a motor-vehicle the combination of a frame, an engine supported at three points on said frame, a speed-gear also supported at three points on said frame, a friction-clutch between the engine and the speed-gear, a flexible connection between the friction-clutch and the speed-gear and means for transmitting the power from said speed-gear to the driving-wheels substantially as set forth.

766,463. Pneumatic Tire. Harry A. Palmer, Erie, Pa. Filed February 15, 1904. Serial No. 193,669. (No model.)

Claim.—1. The combination in a pneumatic vehicle-tire, of a wheel, removable channel-flanges on the wheel-rim, a tire-sheaf open on its inner face adapted to fit into the channel on the wheel rim, reinforcing strips in the sides of the tire sheaf, and means for securing the sides of the tire to the inner faces of the channel flanges substantially as set forth.

766,525. Starting device for Gasoline Engines. Frank Reynolds, Syracuse, N. Y. Filed October 16, 1903. Serial No. 177,244. (No model.)

Claim.—1. In a gasoline engine, the combination with the explosion cylinder, piston in said cylinder, and shaft connected to said piston, of a starting device comprising a compressed air chamber, a pipe leading from said chamber, a valve controlling the discharge of air from said chamber, a carburettor connected to said air pipe, a gasoline chamber communicating with said carburettor, a valve controlling the supply of gasoline to the carburettor, means for simultaneously operating said valves, a pipe conducting the mixture from the carburettor to the cylinder, a discharge valve in the latter pipe, and an electric sparking device in said cylinder, substantially as described.

766,590. Automobile Plow. Henry B. Burdick, Middleton, Okla. Filed April 24, 1903. Serial No. 154,149. (No model.)

Claim—1. A frame, a driving and a supporting wheel at opposite sides of the rear portion of the frame, the supporting wheel being adjustable, a two wheel supported carriage pivotally connected at the forward end of the frame, means for raising and lowering one of the wheels of the carriage, a steering mechanism for the carriage, a motor supported by the frame, a connection between the motor and the driving wheel, a plow beam having its forward end adjustably supported by the carriage, and a lifting mechanism for the plow beam located on the said frame, as set forth.

766,769. Motor Vehicle. Fred Patee, Milwaukee, Wis. Original application filed September 4, 1902. Serial No. 122,005. Divided and this application filed August 10, 1903. Serial No. 168,897. (No model.)

Claim—1. In a motor vehicle, the combination with the sills thereof, of semi-elliptic springs mounted longitudinally thereon, one end pivoted to the sills and their opposite ends longitudinally slidable by compression, a skeleton frame supported by said springs, and straps for securing the frame to the springs for the purposes set forth.

766,773. Brace for Wheels. Richard H. Scott, Lansing, Mich., assignor to Olds Gasoline Engine Works, Lansing, Mich., a Corporation of Michigan. Filed March 15, 1904. Serial No. 198,250. (No model.)

Claim—1. A lock for vehicle wheels comprising two substantial rigid bars adapted to extend from the front to the rear wheels and to rest thereagainst, of adjusting means connecting the two bars for drawing the same together at the end to forcibly position the ends of the bars against the periphery of the wheels.

French Fear Extinction of the Horse.

The rivalry that has been going on for the last few years between the horse and the automobile has given ground for the belief in the diminution, if not complete extinction, of the equine race.

The French military authorities, in view of the possible decrease in the numbers of the horses liable to requisition in time of war, are already thinking of utilizing mechanical

traction for the important service of transport, and have instituted a competition for the selection of a suitable type of automobile. The municipal authorities, too, as the duties levied on forage entering the city of Paris are gradually decreasing, are seeking to cover a deficit which is growing larger with every year.

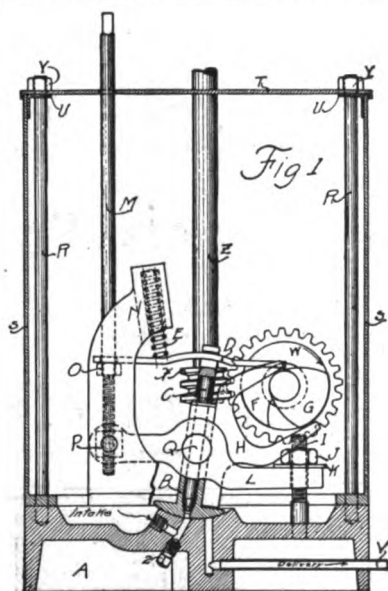
A comparison, however, of the figures given in the annual census of horses in Paris shows that in 1903 their number amounted to 91,016, against 90,147 at present.

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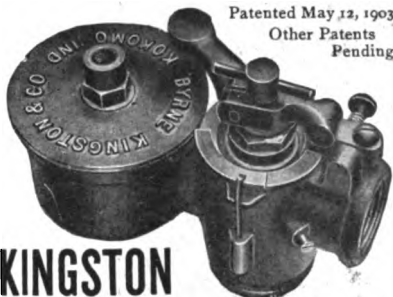
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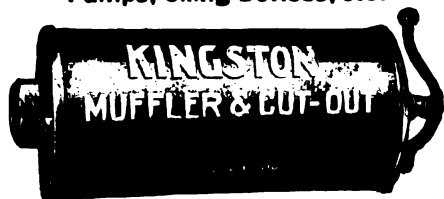
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Having been built to designs furnished by himself, it is to be expected that the body of King Edward's latest car should be something out of the ordinary.

The car itself is of the regulation Daimler type, developing 28-36 horsepower. The body, however, was built by a London coachmaker. Apart from the seating accommodation for two on the driver's seat, five passengers can be carried, three on a seat quite at the rear, and two on a pair of revolving armchairs placed just clear of the side doors to the carriage.

Blue buffalo hide is used for the upholstery of the car, and the exterior is painted in purple lake, lined with red. The fittings are of brass. An electric lamp is fitted in the centre of the roof of the carriage. It is supplied by current from a large accumulator carried over the rear axle. The roof of the carriage is carried forward, and provides a canopy for the driver's seat, which is not, however, fitted with a glass front. There is a large, fixed window at the rear, but the windows at the side are sliding and can be opened at pleasure. Windows are also fitted to drop into position over the side doors; when not in use they are held up to the roof by catches. Communication is held with the driver by opening the central pane of the window behind his seat.

Mixture for Eye Irritation.

The following remedy has been recommended by a physician, who is also a motorist, for eye irritation, caused by dust and flies:

To half an ounce of boric acid (crystals) add six ounces of warm water. Shake well for a minute until the acid crystals are dissolved. All the crystals may not dissolve, but a saturated solution is all that is necessary. A glass stoppered bottle should be used.

To use the remedy put half an ounce into a glass ounce measure, adding to it a half ounce of warm water, and apply the fluid to the eyes by the air of an eye glass, which can be obtained from a chemist. Throw the head back and open and close the eye several times in the liquid. Dust and other foreign matter will thus be washed out.

Before using the mixture wash the face, and particularly the eyes and eyebrows, with warm water.

Better Not..

have any ignition outfit than to have a poor one.

WE MANUFACTURE NOTHING BUT THE BEST.

WRITE FOR CATALOGUE.

AMERICAN COIL COMPANY

West Somerville, Mass.

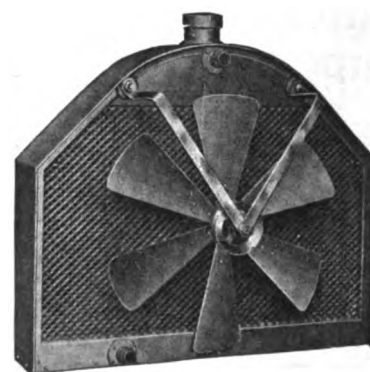
AUTO SUPPLY CO.,

Broadway, corner 50th St. New York Agents.



WHITLOCK COOLERS

For 1905.



The success of the WHITLOCK COOLER has been so completely demonstrated and this device is now so widely used and so well known that a description of it here would be superfluous.

We wish to state, however, that our 1905 cooler will be as far ahead of our 1904 product as that was ahead of those we built in 1903. We are not content to "let well enough alone." The fact that the WHITLOCK COOLER is the best, almost the only, device in its class on the market to-day, has not prevented us from making every effort to improve every detail.

No radical changes from the already popular and successful type have been attempted, but we have confined our efforts to perfecting minor details of construction, to a careful study of the features which promote high efficiency and great durability in operation, to the improvement of processes of manufacture, and to the increasing of our facilities.

We are now receiving orders for early fall delivery.

THE WHITLOCK COIL PIPE COMPANY

HARTFORD, - CONNECTICUT

Protection for Man and His Motor

RAIN APRONS, ENGINE CASE,
CHAIN BOOT

Also Rubber Mats, Hampers, Lamps,
Horns, Clothing, and everything else
required by Automobilists

Send for Catalog

AUTOMOBILE EQUIPMENT COMPANY
251 Jefferson Street, Detroit, Mich.

Autolyte Lamps, Imported Horns.

A. H. FUNKE,
83 Chambers St., N. Y.

Peerless Motor Cars.

THE PEERLESS MOTOR CAR CO.,
Cleveland, Ohio.

QUINBY AUTOMOBILE-BODY DEPARTMENT

EMERSON BROOKS, Manager.
1834 Broadway, cor. of 45th St., New York.
Telephone, 6536-38th St.

TOURING CAR

THE F. B. STEARNS CO.,
CLEVELAND, OHIO, U. S. A.

Big Four Route

TO

St. Louis

"The Way of the World"

to the

World's Fair

For information as to rates, hotels
and boarding houses, address
nearest Big Four Agent, or

WARREN J. LYNCH,

G. F. and T. Agent,

Cincinnati, O.

Nelson Steam Water Pumps

Endorsed by users of the White System as the only
positive and reliable high pressure water feed.

JOHN SIMMONS CO.,
110 Centre Street, New York.

HOMES IN THE SOUTH.

There are in the Southern States awaiting development
thousands of acres of uncultivated farm lands in tracts of all
sizes, which can be purchased very cheaply. They are pro-
ductive, healthy, and close to good markets. In ten States
reached by the lines of the

SOUTHERN RAILWAY.

For information about opportunities now available, prices of
land, character of soils, etc., write to
M. V. RICHARDS, Land and Industrial Agents,
WASHINGTON, D. C., Southern Railway.



The Baldwin Chain Company

— MAKE —

Automobile Chains,
Sprockets, Spur and Bevel
Gears.

Baldwin Chain & Mfg. Co.,
Worcester, Mass., U. S. A.

DIXON'S GRAPHITE LUBRICANTS.

Assures speed, comfort, quietness and
freedom from many Auto troubles.

Booklet 83-G and free sample for the
asking.

JOSEPH DIXON CRUCIBLE CO.,
Jersey City, N. J.

New York City Salesrooms, 68 Reade St.

AUTO LEATHER

Our leathers are used by most
of the largest automobile manu-
facturers of this country.

Ask us why.

AMERICAN OAK LEATHER COMPANY,

Cincinnati, Chicago, St. Louis, Boston.



MILLER OIL GUN.

This oil gun or syringe should be part of the equipment of
every automobile. It will handle light and heavy oils and is
intended for oiling transmissions, gear boxes and inaccessible
places. By its use 50 per cent of the oil now wasted can be
saved. Furnished in polished brass. Diameter of barrel 1 in.
Total length 13 1/4 in. Guaranteed.

Price, \$1.00 each; \$10.00 per dozen.

SPECIAL PRICES TO MANUFACTURERS AND JOBBERS

Catalog mailed upon request.

The Largest Automobile Supply House in America.

CHARLES E. MILLER,
97-99-101 READE ST., NEW YORK CITY

Retail Branch: 38th St. and Broadway.



Springfield Top

PATENTS PENDING.
Aluminum Bodies
Aluminum Fenders
Aluminum Hoods.

**Springfield Metal
Body Co.,**
Springfield, Mass.

RADIATORS,

TANKS,
MUFFLERS,
FENDERS,
HOODS.

BRISQEE MFG. CO., - Detroit.



HIGH-GRADE LAMPS

Acetylene Gas and Oil
ATWOOD MFG. CO.,
Amesbury, Mass.



"Jack, what is CH & D, a new breakfast food?"
"No, it's a Railroad from Cincinnati to Chicago. Speaking of food,
I got the best meal on their cars I ever had on a railroad."

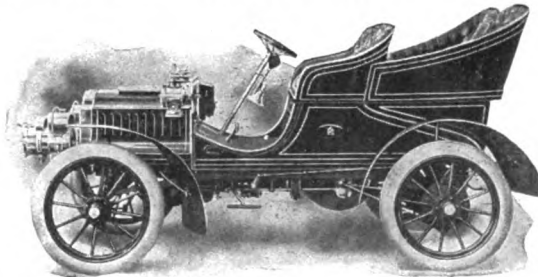
Another American Invasion



Oldsmobile

The progress of the Oldsmobile abroad has been a continual triumph. It has led the advance of automobiles into remote corners of the earth. Everywhere it is recognized as the world's standard runabout—*the best thing on wheels.*

Oldsmobile
Standard Runabout
Price \$650



Oldsmobile
Light Tonneau Car
Price \$950

The Oldsmobile Curved Front Runabout is the most thoroughly tested automobile in the world. Built upon the solid foundation of Oldsmobile experience the Oldsmobile Light Tonneau Car possesses style, quality and efficiency to an unequalled degree. It is in no sense an experiment. It is built to run and does it. It has plenty of speed and no end of endurance. It is built without gaskets. Cylinder and cylinder-heads are cast integral. Main bearings are self-oiling. The hub-brakes are controlled by foot-lever. There are numerous other distinct features.

Our immense factory facilities—nearly one million square feet of floor space—insures prompt delivery.

OLDS MOTOR WORKS, 1332 Jefferson Avenue, Detroit, U. S. A.

Member of the Association of Licensed Automobile Manufacturers.



"Toledo"
"The Quiet Mile-a-Minute Car"

THE LEADER
in the Great Run From
New York to St. Louis

Always at the Front. First to Arrive.
Never Out of Commission.

THE PRIDE OF AMERICA AND A CREDIT TO HER MECHANICAL SKILL.



September Deliveries.
24-Horse Power, 4-Cylinder Car, \$3,500.

POPE MOTOR CAR CO.
TOLEDO, OHIO

Members Association Licensed Automobile Manufacturers.

HAVE WE "MADE GOOD"?

On April 13th a disastrous fire destroyed most of our plant, wiping out the work of several hundred men for several months previous. Our competitors immediately "got busy" among our dealers and tried to convince them the CADILLAC was "down and out," some going so far as to intimate that we were financially unable to stand such a blow, and that rebuilding would probably begin, but it would be impossible for us to recuperate, material people would hesitate to ship us, and delay would follow delay until the season was gone; and that what little stuff we did get out would look like the remnants "of a fire sale," etc.

On April 15th we sent out our famous "Plugged Nickel" circular No. 13, in which we promised to begin shipping model B's in 30 days. On May 7th we shipped the first model B made after the fire. On May 13th we had shipped thirteen model B's. On May 31st our B shipments, manufactured after the fire numbered 165, and during the month of June we actually delivered automobiles to the transportation companies at the rate of one every fifteen minutes during working hours. Our model B sales were something tremendous. Our loss of business was necessarily large, yet, with all the influence which was brought to bear against us, few, if any, of our dealers were induced to take up and push other makes. Three-fifths of the model B customers who would not wait bought a car selling at \$1,700.

From any standpoint it would appear to us that most dealers and most experienced buyers knew a good thing. As a dealer, can you afford to let an opportunity to secure the Cadillac agency get away from you? All our contracts expire on October 1, 1904. We anticipate few changes in present agency list. There are a few "dead ones." They will be replaced by live hustlers. We are "tied up" at one or two points. Changes will be made in every city where we find agents pushing other makes to the exclusion of CADILLACS, or violating the terms of our contract. We want live, loyal dealers who know how to take care of and instruct buyers. Our line has no equal. We are constantly improving it. Those who want a car at less than \$1,000 will make no mistake in buying now. Dealers are already contracting for the Cadillac agency. We intend to close every foot of territory in America before January 1st. If you want the CADILLAC agency, now is the time to "get busy." We want, and are going to have, good legitimate dealers or none. We want representation that will be fair with CADILLAC owners, or we'll have none. We have demonstrated our ability to turn out automobiles in quantities that were natural sellers. Can you, as a dealer, miss your chance to profit by this sort of enterprise? Our new factory will be as nearly perfect as modern methods and means can make it. No other maker will be able to give better service. No other maker will have an equally popular line. No other maker will fill orders more promptly. What more can you ask? Prices may be higher as our cost is being increased. Discounts will remain unchanged.

CADILLAC AUTOMOBILE COMPANY, - Detroit.

Members of Association of Licensed Automobile Manufacturers.



Detroit, Mich. U.S.A. August 8, 1904.

Badger Brass Mfg. Company,
Kenosha, Wis.

Gentlemen:

We are taking the very first opportunity to let you know that our second attempt to establish a new non-stop record came to a successful termination last night shortly after midnight when Charles Schmidt crossed the tape after having covered 1,000 miles at an average speed of over 33 miles per hour.

We were only able to secure the right to use the track between Saturday night and Monday morning so that more of our driving had to be done during the night than by day. This made the selection of a lamp equipment a matter of the very greatest importance, for the accident to Mr. Schmidt in our first attempt when the lights went out evidently through the men on the car accidentally squeezing the hose connection at the generator, showed us to what an extent the lives of the operators were dependent upon the reliability and efficiency of the lamps.

We cannot praise in terms too strong the powerful and steady stream of light which hour after hour during all of Saturday night and most of Sunday night enabled Mr. Schmidt to make a record which is without parallel. You have our heartiest congratulations and we feel certain that the exhibition made by your lamps before the hundreds of motor enthusiasts who were always in attendance from start to finish cannot help but be beneficial to you by convincing them that "Solars" are the lamps to "Show the Way."

Yours very truly,

PACKARD MOTOR CAR COMPANY.

B. D. Walden

Manager Sales Department.

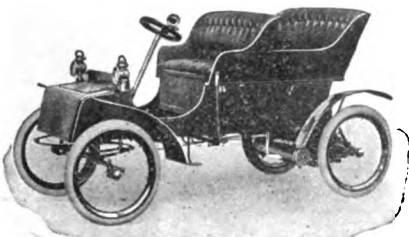
S.D.W.-E.F.C.

HAND BOOK OF GASOLINE AUTOMOBILES ISSUED FOR THE INFORMATION OF THE PUBLIC WHO ARE INTERESTED IN THEIR MANUFACTURE, SALE AND USE.

This handsomely bound and artistically printed book now in the hands of the printers will contain about 88 pages and will illustrate about 80 gasoline cars, one car and its specifications to each page. It is issued primarily for convenience and information to the prospective purchaser of an automobile. The products of the principal manufacturers throughout the United States of America and the Importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto in red ink. The questions being uniform, the ease of comparison is obvious and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste, or the means at his command.

Sent upon receipt of 6 cents in stamps for postage.

ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS,
Room 1009—No. 7 East 42nd Street, New York.



Tonneau Car, price \$525.

IF YOU KNEW



Runabout, price \$475.

how useful one of these little machines would be to you, and how much pleasure can be derived from them, your order and check would be on the way to us before another sun has set. The following is what one purchaser says; we have received hundreds of similar letters:

WALTHAM MFG. CO., Waltham, Mass.

Ashton, Illinois, July 25, 1904.

Gentlemen: I do not wish to take up your valuable time, but I do wish to let you know what I think of the Orient Surrey I purchased of you some four weeks ago. I went to Chicago a week ago and carried four persons, and it is a good distance of over one hundred miles. I made the trip, in and out, in extra good time, and did not have one bit of trouble either way. It is the easiest riding machine that I ever rode in, and as for power will say that I think it has more than you claim for it, as it will climb any kind of a hill, and it is very seldom that I have to use the slow-speed gear.

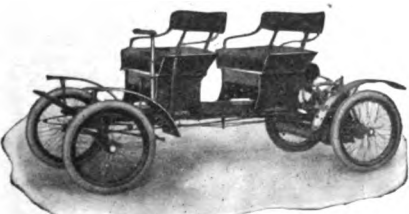
I would have written you some time ago, but I wished to give it a thorough trial, and now I have done so on hill, in sand, and in mud, and am pleased to say that I have never found it wanting in any particular.

Wishing you success, I am,

Yours respectfully,

N. H. RANDALL.

Write for catalogue.



Surrey, price \$450.

WALTHAM MFG. CO.,
WALTHAM, MASS.

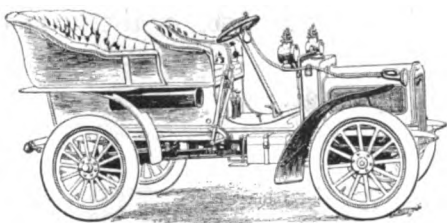


Buckboard, price \$425.

Re The St. Louis Tour.

Nine Incomparable White Steam Touring cars started and nine arrived at St. Louis as per schedule. Four from New York; one from Boston; two from Cleveland and two from New Orleans.

**If you start in a White, nine times out of nine
you will arrive at your destination on time.**



1908 model White Steam Touring Car.

"The best collective performance, however, was that of the brigade of five White steamers, which, keeping well together throughout, glided over the uneven surface as if they had been skimming over asphalt."—*N. Y. Herald.*

WHITE SEWING MACHINE COMPANY, CLEVELAND, OHIO.

HONOR WELL PLACED.



**THE STRENGTH OF THE TENNANT
TIRE AS A WHOLE IS IN THE
HARMONY OF THE PARTS.**

They have an excellence that is all their own and insure a season of tire satisfaction. The only puncture-proof tire that has proved worthy of the title.

**No pinching of the inner tube. Rim
cutting impossible. Absolutely
perfect in every detail.**

If such a tire appeals to you, a letter will bring
Catalogue and full information.

TENNANT AUTO. TIRE COMPANY,

144 West Main Street, Springfield Ohio.

NEW YORK OFFICE, 1900 Broadway, Corner 63rd Street.

THE ONLY WAY

to build automobiles that
will stand the test is to
use sheet metal parts in
place of castings.

WE DO HEAVY AND DIFFICULT
STAMPING.

The Crosby Co.,

BUFFALO, N. Y.



IF THE RIM



LESSONS OF 1904

are taken to heart

“SWEDOH” Spring Steel Rims

are likely to be the general equipment of
all good machines in 1905.

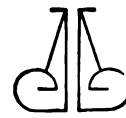
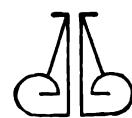
“SWEDOH” SPRING STEEL RIMS have conclusively demonstrated
their superiority by the severest tests in actual service, giving results
unattainable with rims made of ordinary stock.

“SWEDOH” SPRING STEEL RIMS are made true and stay true.
True as “SWEDOH” steel is axiomatic.

THE AMERICAN TUBE & STAMPING Co.,

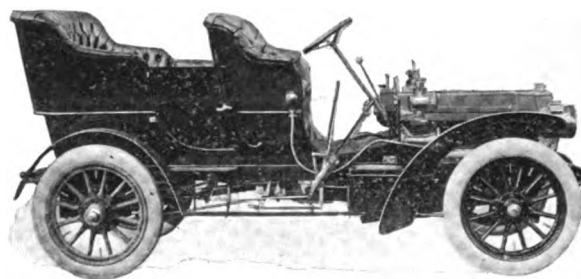
Bridgeport, Conn.

We own and operate our steel billet-
making and hot and cold rolling
mill's and stamping works.



Peerless

**THE CAR
OF
ACHIEVEMENT**



**BRILLIANT VICTORY OVER
FOREIGN MACHINES AT
NEWPORT RACE MEET,
JULY 30th.**

A summary of the fifth race—open to gasoline
cars not exceeding 24 horse power—is as follows:

First heat.

PEERLESS, 24 H. P., first.

Mercedes, 20 H. P., Second.

Mercedes, 18-22 H. P., Third.

Second heat.

Panhard, 24 H. P., first.

Final heat.

PEERLESS, 24 H. P., first.

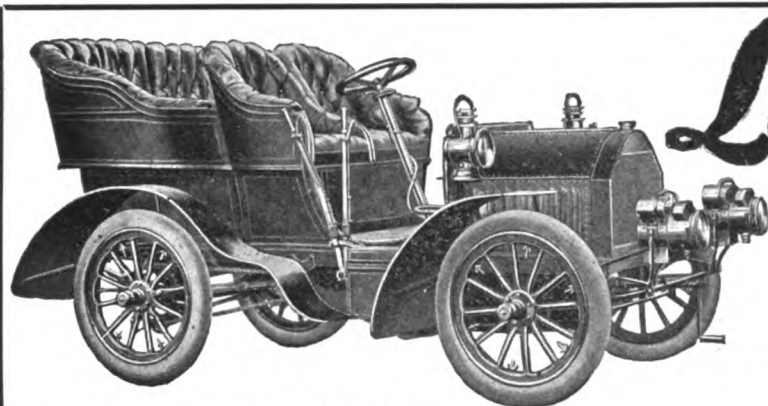
Panhard, 24 H. P., second.

The numerous victories of this kind achieved
by the Peerless demonstrate not only that our
engine is very powerful, but also that, by our
unique system of direct drive, all of the power
is delivered to the rear wheels.

PEERLESS MOTOR CAR CO.

CLEVELAND, OHIO

Member Association Licensed Automobile Manufacturers.



Type C. \$2100 complete.

Locomobile GASOLENE TOURING CAR.

HAVE YOU BEEN DISAPPOINTED IN GETTING
DELIVERY OF SOME OTHER MAKE?

If so, Communicate with us.

"EASILY THE BEST BUILT CAR IN AMERICA."

PRICES, \$2100 upwards.

The Locomobile Company of America, Bridgeport, Conn.

BRANCHES

NEW YORK, 76th St. and Broadway. CHICAGO, 1354 Michigan Ave.
PHILADELPHIA, 249 North Broad St. BOSTON, 15 Berkeley St.
Member Association of Licensed Automobile Manufacturers.



Hotel Lenox

Boylston and Exeter Streets
Back Bay, BOSTON

ONE OF THE FINEST MODERN
FIRE PROOF HOTELS IN THE
COUNTRY. TWO MINUTES'
WALK FROM THE BACK BAY
STATIONS, AND ONE BLOCK
FROM COPLEY SQUARE

CHARLES A. GLEASON, *Manager*
Send for illustrated booklet

NEW WORLD'S RECORD

Established by

DARRACQ MOTOR CAR

(Under Sanction American Automobile Association.)

New York to St. Louis and return a distance over 3000 miles,
fifteen days and two hours continuous running of motor is the record
established by Mr. F. A. La Roche with a 15-20 h. p. Darracq
Touring Car equipped with Michelin Tires.

The Best by Test.
DARRACQ DEEDS DEFY DUPLICATION.
Survival of the Fittest.

AMERICAN DARRACQ AUTOMOBILE COMPANY,
Controlled by F. A. LA ROCHE CO.,

(Licensed Under Selden Patents.)

652-666 Hudson St. & 147 West 38th St., New York.
PHILADELPHIA, 317-319 North Broad St.

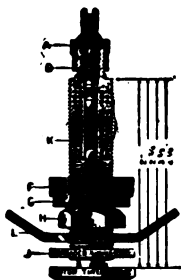
SCHRADER UNIVERSAL VALVE.

Trademark Registered April.

SIMPLE AND ABSOLUTELY AIR TIGHT.

MOTOR TIRE VALVES, as shown in cut, are made in four lengths as
shown. Cut is exactly half size of the 2 in. valve

SUPPLIED TO THE TRADE BY ALL TIRE MANUFACTURERS.



MANUFACTURED BY

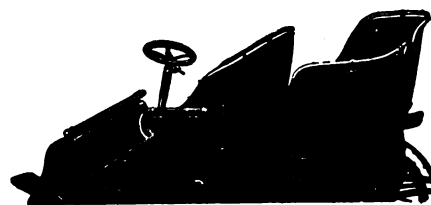
A. SCHRADER'S SON, Nos. 30-32 Rose Street, New York.

"BETTER Than the \$8000 French Car"

is one pleased purchaser's opinion of the
Thomas 3-cylinder Touring Car,
which costs several thousands less.

There is every reason why this should be so. Even if price is not an object, wisdom and self-satisfaction ought to dictate inquiry into the merits of the car that should beget such opinions. Are you familiar with them?

E. R. THOMAS MOTOR CO., Buffalo, N. Y.
Member of the Association of Licensed Automobile Manufacturers.



Mr. Owner,
ask
Mr. Dealer
to order
Mr. Manufacturer

to furnish your Automobile equipped with

POLISHED BRASS RAILS

Or, if you have your machine now, have your DEALER
ORDER RAILS DIRECT from the manufacturer.

JOS. N. SMITH & CO.,
33 West Larned St., Detroit, Mich.



FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in
this widely-sold car we have not changed
the price — **\$1,700** at the factory.

Two cylinder, horizontal, opposed motor in front.	Automatic oiling of engine and other parts.
Ball bearing transmission gear.	Gear drive.
Wheel or lever steerer.	Every part instantly accessible.
Divided front seat.	

THE AUTOCAR COMPANY,
Ardmore, Pa.

BOOKLET.

Member of the Association of Licensed Automobile Manufacturers.

The Best Automobile Motors

AND

Automobile Charging Machines

ARE MADE BY

THE ELWELL-PARKER ELECTRIC CO.,
CLEVELAND, O.

TRY US FOR

PRESSED STEEL FRAMES.

We are making them from the Highest Grade of Cold Rolled Steel under the most perfect conditions of manufacture.

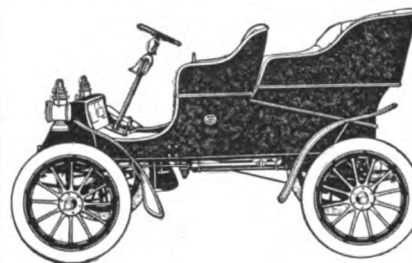
Latest types of Hydraulic Presses and Rivetters, give us unsurpassed facilities for making pressed steel frames in large quantities. Where accuracy and quality are considered we guarantee satisfaction.

NOW IS THE TIME TO CONSIDER 1905 REQUIREMENTS.

Send us your drawings and get our prices.

CLEVELAND CAR SPECIALTY CO.,
CASE AVENUE and LAKE STREET, CLEVELAND, OHIO.

THE FORD



is an automobile with a reputation. We have proven our ability to make and sell for \$900 a car equal to any machine costing less than \$2,000. What is more, THE FORD has stood the test of time and hard usage. The double opposed motor is the same type of engine used in the most expensive touring cars. FOR THE PHYSICIAN and Business Man the reliability of the FORD is its strongest recommendation. Its simple construction enables any member of the family to easily master the mechanism and to readily learn to operate it.

Write for catalogue and full particulars to

FORD MOTOR CO., Detroit, Mich.

"The A.B.C. of Electricity"

will help you understand many things about motors which may now seem hard of understanding.

108 Pages.

50 Cents Per Copy.

THE GOODMAN COMPANY,
84 TRIBUNE BUILDING, NEW YORK.

Extract from the MOTOR AGE of June 11th, 1904:

“Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class.”

This was a stock

Rambler

the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue “W” fully describes all models, and our booklet “A Little History” gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

THOMAS B. JEFFERY & COMPANY,

KENOSHA, WISCONSIN.

BRANCHHOUSES: { Chicago, 302-304 Wabash Avenue.
Boston, 145 Columbus Avenue.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York U. S. A., Thursday, August 18, 1904.

No. 21

CREST'S OFFER TO CREDITORS

**Unable to Meet Obligations Cambridge Concern
Offers Cash and Notes in Full Settlement.**

Unable to meet its obligations, the Crest Mfg. Co., Cambridge, Mass., has submitted a proposition to its creditors, under which, if accepted, it will liquidate or reorganize. The plan contemplates the payment in cash of the small creditors and the giving of six and nine months notes in all cases where the indebtedness exceeds \$250. If approved, the plan assures to all creditors the payment of their claims in full.

It has for some little time been an open secret in the trade that the Crest company was in bad shape financially, and the announcement will not cause much surprise. Lack of working capital has hampered the company's operations and prevented the proper development of its line of Crest machines; and during the past few months the concern has been unable to meet its obligations as they matured.

The plan submitted to retrieve the concern's fortunes is accompanied by a statement of its condition on August 5, based upon a recent inventory. The assets, consisting mainly of complete and incomplete cars, plant, machinery, etc, aggregate \$93,000, against which there are \$87,612 of liabilities. Of the latter, however, it is proposed to withdraw the claim of Henry W. Lamb, the company's president and chief creditor, amounting to \$37,000, thus reducing the liabilities to \$50,612. It is then proposed to pay 178 small creditors, whose claims are less than \$250, \$10,112.69 in cash, said cash to be provided by H. W. Lamb. The remaining \$40,119.31 will be provided for by giving the company's notes running one-half for six and one-half for nine months for the full amounts; these notes are to bear 6 per cent interest, to be indorsed by Henry W. Lamb, and to contain a provision under which partial or entire payment may be made before maturity.

In consideration of the cash advances and indorsements of Mr. Lamb, it is proposed to turn over to him all the company's assets and constitute him its liquidating agent, with

the privilege of reorganizing the company, a plan for which is under consideration.

A number of creditors have already accepted the plan outlined above, which possesses many and obvious advantages, and is deemed far preferable to placing the company in a receiver's hands and winding it up publicly.

Autos Burn in Fauber Fire.

Fire destroyed the factory of the Fauber Automobile Co., Elgin, Ill., makers of automobiles and bicycle parts, last week, inflicting a loss estimated at close to \$175,000, which is nearly covered by insurance. Fourteen completed automobiles and a large number of others in process of manufacture were destroyed, together with much valuable machinery.

The fire is ascribed to spontaneous combustion, originating in the excelsior department. The factory is located near the eastern limits of the city, and was supplied with water from one city main. This was also connected with fire hose in the building. When the night watchman discovered the blaze he turned on all the fire faucets in hope to flood the building. A few moments later, when the department arrived, the faucets could not be closed, and pressure on the outside hydrant forced the water only a few feet into the air. The fire had gained such headway before the arrival of the department that firemen did not dare enter the building.

Originally devoted to the manufacture of bicycle parts and fittings, the Fauber factory has all this season been partly engaged on the production of automobiles. The Marr car was made for a Detroit concern in which the Fauber company was heavily interested, and it was stock, finished and unfinished, for this vehicle that was destroyed.

Winton Opens a London Branch.

The Winton Motor Carriage Co. has opened a London branch store at 48 Holborn Viaduct, with C. L. Duck, formerly of Friswell, Ltd., in charge.

It is announced that the Alfred James Foundry Co., of La Crosse, Wis., will shortly commence the manufacture of automobiles.

MILLION DOLLAR OLDS COMPANY

**R. E. Olds Heads New Lansing Concern—To
Make Pleasure and Commercial Vehicles.**

With a capital of \$1,000,000, full paid, a company has been formed at Lansing, Mich., with R. E. Olds at its head, to undertake the manufacture on an extensive scale of motor vehicles. The name has not been positively decided upon, but in all probability it will be The R. E. Olds Motor and Truck Co. The new company will make two-cylinder touring cars and commercial vehicles.

In January last R. E. Olds resigned the positions of vice-president and general manager of the Olds Motor Works and went on an extended pleasure trip to California and Mexico. Ever since then there have been rumors that he was organizing a big company to undertake the manufacture of automobiles. About three weeks ago these rumors were revived, this time with a nearer approach to definiteness than ever before, but no authority could be found to vouch for them. The present organization is, of course, the outcome.

Mr. Olds's long and intimate connection with the motor business assures the new company the same capacity and sagacity in the management of its affairs that attended his former work. With the enormous capital at its disposal and the factory facilities that it will possess, the concern is certain to become an important factor in the trade.

Okada of Osaka Here.

Despite stress of war at home, Japanese merchants continue to ply their trade. A New York visitor this week was H. M. Okada, president of Okada Bros., general importers, of Osaka, Japan. His firm is about to add automobiles to its lines of goods, and Mr. Okada is looking over the field. He is of the opinion that a light, moderate priced touring car would command a fair sale in Japan.

N. E. Parish Retires.

N. E. Parish has retired from active participation in the affairs of the Parish & Bingham Co., of Cleveland, Ohio.

FOUR-CYLINDER FORD

Water-Cooled Car of This Type Will be Made by Detroit Concern—Price \$2,000.

It has been an open secret in trade circles for some time that the Ford Motor Co. of Detroit, Mich., were at work on a new four cylinder car, that they had abandoned the four cylinder air cooled car shown at the local exhibition last spring, and that the new-comer would be of the water cooled type.

The new four cylinder Ford is now complete, and the details concerning it are here given for the first time.

The motor is copper jacketed, with separately cast cylinders of 4x5 dimensions, with mechanically operated intake and exhaust valves, and rests on an aluminum crank case made in two pieces, the lower half being detachable and affording ready access to the working parts.

Pressed steel frame, semi-elliptic springs in front, and full elliptic rear springs; a wheel base of 92 inches, planetary gear transmission, giving two speeds forward and a reverse; bevel gear shaft drive (this being the new ball and socket type made by the American Ball Bearing Co., of Cleveland, Ohio), internally operated rear hub brakes, 32-inch wheels, fitted with 3½-inch clincher tires, and side door entrance body constitute the chief constructional features of the new Ford. The price, with full equipment, will be \$2,000, and work on two hundred and fifty cars will be started at once.

This car is almost entirely the work of Mr. C. H. Wills, the company's mechanical expert, who has been the associate of Henry Ford for several years. It will be built in the new factory of the Ford company, which is rapidly nearing completion, the orders already in hand necessitating that the work be commenced in a hurry.

Auto Ready at Sheriff's Call.

Sheriff Tegtiner, of Milwaukee, Wis., is a resourceful man, and possessed of up-to-date ideas. He has made arrangements with the C. G. Norton company, of Milwaukee, under which he can have the use of an automobile at any time he deems the service necessary. Deputy Johnson has been instructed in handling the machine, and will be sent out when emergencies make fast service imperative.

Electric Street 'Buses for Cleveland.

The Commercial Motor Vehicle Co., of Cleveland, has been formed to operate an electric 'bus line in competition with the street railway systems of that city. They will operate under license from the Imperial Motor Vehicle Co., of Chicago.

Fraeger of Peoria Will Build.

F. P. Fraeger & Son will erect a plant at Peoria, Ill., for the manufacture of a car invented by the former. It will have a double opposed cylinder of ample power.

Local Tradesmen Frown on Speeding.

At the weekly meeting of the New York Automobile Trade Association, held on Wednesday of last week, the following resolution was adopted:

"Resolved, That the New York Automobile Trade Association is heartily in sympathy with the earnest efforts being made by various persons and associations to mitigate the evil of reckless speeding in dangerous localities, and to foster a strict observance of the rules of the road.

"While we favor the fullest development of the automobile, and feel an interest in trials of speed where due precautions are observed, at the same time, we condemn the wanton and unlawful indulgence in excessive speed, which endangers the car, the driver and the public."

Mile-a-Minute Car for Tritchle

Oliver P. Tritchle, a well known electro-chemist, of Denver, Col., who has already achieved prominence in the motor world by driving a Standard Baker Imperial with regular equipment and carrying an extra passenger one mile in 1:04, is ambitious of further honors, satisfied that he can negotiate the mile on Denver's famous elliptical track in one minute or better. To that end he is having a 2½-horsepower Elwell-Parker motor, using thirty cells fitted to his Baker Imperial, the motor placed to the left of the car and driving direct without reduction. He will enter the car at the coming Denver races.

Davenport Dealers Fix Hiring Rates.

Hereafter all Davenport (Iowa) dealers will charge the same rates for automobiles on hire. They met last week and agreed on a schedule, based on a car carrying four passengers and supplied with a chauffeur. The maximum charge is \$3 an hour on Sundays and \$2.50 on weekdays, with \$2 and \$1.50, respectively, per hour after the first hour. Fixed rates are charged for excursions to points of interest in the vicinity.

Hughes to Manage Providence Branch.

When W. J. Foss, at present manager of the Providence (R. I.) branch of the Pope Mfg. Co., goes to Boston to succeed W. E. Eldridge, his place will be taken by Archie E. Hughes. The latter has been stationed at Toledo, where he has acted as general representative; of late he has also had charge of the Pope racing interests. He is well known in the trade.

Akron or Ashland Will do.

Two young men, S. R. Homericks and Henry Hubbs, are trying to promote a company, to locate either in Akron or Ashland, Ohio, for manufacturing automobiles which will sell for \$700. The automobiles, one of which the young men are travelling about the country in, are described as "neat and good cars."

W. E. Metzger, of the Cadillac Automobile Co., who has been on a Pacific Coast trip, is due in Detroit about the 25th inst.

SIX-CYLINDER THOMAS

Buffalo Maker Announces "Double-Triples" Model for 1905—Racing Car Almost Ready.

It has been on the cards for some little time that the E. R. Thomas Motor Co. planned some ambitious offerings for the 1905 season. Announcement made this week confirms this belief, and makes known that the Buffalo concern will make a six cylinder type of car—a "double triple cylinder" as it terms it—including racing and touring cars, ranging from 50 to 100 horsepower.

Work on the chassis of the racing car is so far advanced that it is promised to be ready in eight weeks, after months of labor on it, and arrangements have been made to use it in all the important events. A limited number of six cylinder cars will be constructed, and orders for a number of them have already been received. Orders placed now will secure machines in time for next season.

The cars will be built as racers, semi-racers and touring cars, and will be fitted with special open or limousine bodies.

Des Moines Concern Changes Hand.

A bill of sale involving the double transfer of the Des Moines Automobile Company, Des Moines, Iowa, to C. Altenburger, and C. Altenburger to A. A. Altenburger, has been filed with the county recorder in that city. The bill of sale proper, signed by C. B. Paul, president, and G. M. Read, secretary, and dated October 3, 1903, transfers the Des Moines Automobile Company to C. Altenburger for \$4,000. C. Altenburger then transferred the right in the bill of sale to A. A. Altenburger.

Besides the bill of sale there is, in connection with the concern, a chattel mortgage filed in favor of Mose Levich for \$115.

The Week's Incorporations.

New York, N. Y.—Sultan Motor Co., under New York laws, with \$200,000 capital, to make automobiles. Directors: Henri De Buren, Nelson Bliss, H. V. Rutherford, New York.

Kearny, N. J.—The Newark Pneumatic Puncture Proof Tire Co., under New Jersey laws, with \$25,000 capital. Incorporators: Henry Willoughby, jr., John Millar and Edward K. Patterson.

Chicago, Ill.—Hanson's Automobile Works, under Illinois laws, with \$1,500 capital, to build, repair and store automobiles. Incorporators: John Hanson, Charles O. Mueller and Louis A. Mueller.

Plant for Mobile, Ala.?

Mobile, Ala., has visions of a motor factory. An unnamed concern with a capital of \$70,000 is said to be contemplating locating there and erecting a \$40,000 plant. The latter will be devoted to the manufacture of motors for automobiles and boats.

LA ROCHE HAD A SANCTION

**His Non-Stop Trip Was Officially Recognized
by A. A. A. Tour Committee.**

Considerable fuss has been stirred up over the non-stop run of F. A. La Roche, owing to astounding attacks by an individual, who has been industrious in an endeavor to discredit the whole feat by circulating statements that the run was not sanctioned by the American Automobile Association.

The facts in the case appear to be that the run was not sanctioned by the racing board of the American Automobile Association, but that it was sanctioned by President Whipple of the A. A. A. and by the touring committee of that body. The board did not consider the event one within its jurisdiction, and very properly declined to issue a sanction. Mr. La Roche then applied to President Whipple, and the sanction was obtained from the touring committee, as it was a test tour and not a race. In evidence of the run having been sanctioned Mr. La Roche has given out a letter, dated July 23 and written to him by Chairman Augustus Post of the A. A. A. tour committee. This communication reads as follows:

"In reply to yours of July 22, applying for a sanction for a non-stop contest with a Darracq, to be driven in relays by F. A. La Roche and Alexis Le Blanc, test to start on Monday, July 25, at 7 o'clock, the route being from New York to St. Louis and as much after that as they see fit to cover, I beg to say that you have been granted a sanction from the American Automobile Association, through its touring committee, for this undertaking. We hereby appoint as your observers Mr. Norris M. Mason, president of the Michelin Tire Agency, and a member of the Automobile Club of America, and Mr. H. H. Everett, of Motor, and Mr. J. D. Porter, eastern manager of The Motor Age, as substitute observer. You to undertake to pay all the expenses of the observers and see that the association is under no expense whatever in making this test.

"If successful in the outcome of this test, we will grant you an official certificate of the American Automobile Association, and in any event will furnish you with a copy of official report made by the observers. As was suggested by Mr. Whipple, and now formally expressed by us, it is suggested that in granting this sanction, in the event of extraordinary stops being made, such as crossing railways, saving human lives, and in the case of frightened horses, we will require a full and complete record of the circumstances. And inclosed with, and hereby made a part of this letter, you will find a letter, written by President H. W. Whipple to the participants in the St. Louis tour of 1904, and such parts of it as may apply to this (one of its features).

"We will immediately issue instructions to the observers, and desire that you notify them of the details of your arrangements."

Meantime, the person who has been trying to discredit Mr. La Roche, because of personal spite, is interested in promoting a silly non-stop run up and down over a twelve and a half mile course of fine roads along the New Jersey coast. This run, theatrically inaugurated and heralded as the only genuine official affair, is not sanctioned by either the A. A. A. racing board nor its touring committee, and, compared with the cross country trip of La Roche, will be of no value as a feat.

Small Foreign Orders Welcomed.

The steadily growing exports of American automobiles is due in no small degree to the care with which small orders from out-of-the-way places are cultivated and taken care of. In marked contrast is the attitude taken by English concerns, as shown by the following complaint made by a dealer at Devonport W., Tasmania:

"One of the largest importing firms here made inquiries through their English and American representatives as to the conditions, etc., attaching to colonial agencies for a number of cars. The replies received by the firm, which have been sent on for my perusal, are, in the main, characterized by a distinctly independent style and absurd restrictions as to the number of cars which must be ordered per year. These remarks are more applicable to letters from English than from American firms.

"Now, if manufacturers would consider that a shipment of twenty cars would flood the market here for twelve months, they would see at once the absurdity of handicapping traders, and compelling them, though against their will, to place their orders with American houses, which are quite satisfied to get in two or three cars per year; knowing that, as first in the field, they must eventually get a large share of the trade. About a dozen American cars were imported last season, but as far as I am aware only two English ones.

"Most English motors are unsuitable for colonial use, but quite a number could be altered, at little expense, to suit our hilly, high-pitched roads."

Lillibridge's Car Was all Right.

It is stated by the White Sewing Machine Co. that there was no foundation whatever for the report that went out to the daily papers to the effect that a serious accident happened to the White car of Roy D. Lillibridge at Springfield, Ill., while he was en route to St. Louis.

It appears that Mr. Lillibridge himself was compelled on account of ill health to withdraw from the run at Chicago, but he sent his car through with his chauffeur, who reached St. Louis in the machine on Wednesday last with the rest of the White contingent. No accident of any moment happened to Mr. Lillibridge's car during the entire run.

Plans are being drawn for a plant to be built for the Moline Automobile Co., of Moline, Ill. One building, 300x60 feet, two stories high, will be erected this year.

CHICAGOANS GO UNTAGGED

Injunction Obtained by Club Preventing Enforcement of the Law.

Chicagoans are having a lively time again fighting the law. On last Thursday a petition filed by the Chicago Automobile Club was granted, and Judge Hanecy granted an injunction restraining the police and other city officials from arresting automobilists who do not comply with the ordinance requiring licenses, numbers, etc.

The petition for the injunction was made in behalf of the members of the Chicago club, they being all named individually, on the ground that the law is unconstitutional. The points made by the club in applying for an injunction were:

Numbering, as bogus numbers often are used, leads to confusion and the arrest of innocent persons.

Numbering is "an easygoing method of apprehending violators of the law and of no practical benefit."

Automobiles usually are operated in boulevards which are under the control of the park commissioners and patrolled by mounted police, who are capable of arresting offenders.

The ordinance gives the automobile board and the Mayor the power of discrimination.

Without an injunction "a multiplicity of suits at law and criminal prosecutions to enforce the ordinances and the collection of the license fees immediately will follow."

For reckless driving the State laws provide ample remedy.

Enforcement of the ordinance would prevent competent drivers from operating machines.

Now that the injunction has been granted, the Mayor and the police are wrathful, and threaten to make all automobilists crawl through the streets by a strenuous enforcement of old speed laws made for all vehicles.

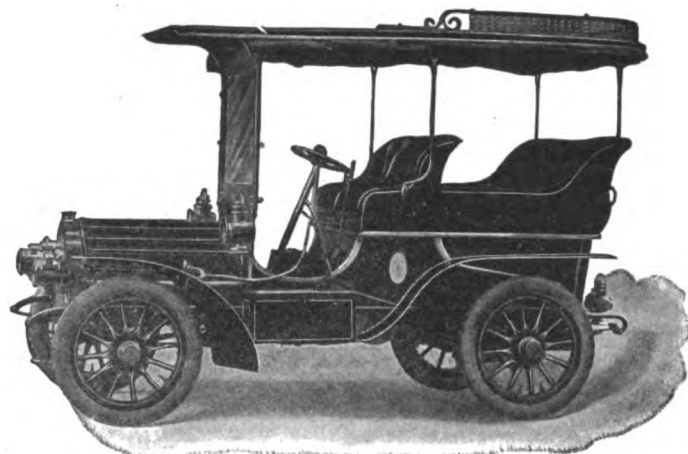
The city's appeal from Judge Hanecy's decision will take precedence over nearly all other cases, because it does not go into the points at issue on the ordinance, but attacks the court's right to enter an injunction without giving the city notice.

Brooklyn Experimental Car Completed.

There has just been completed by the Motor and Gear Mfg. Co., 91 Orange street, Brooklyn, N. Y., a 24 horsepower, four-cylinder, touring car, with 100-inch wheel base, weighing 2,200 pounds and designed to carry a 1,200-pound load. The vehicle is intended to be used as a demonstration car. If successful, it is said that work will be started on a batch of twenty-five similar cars.

Fire Attacks New York Shop.

Fire was discovered in the repair shop of the Lyon Automobile Company, No. 52 East 124th street, New York City, last week, but was soon put out. About \$200 worth of damage was done.



The 1904 Haynes

1904
Tonneau

TWO MODELS

1904 Light
Touring Car

Tonneau, \$2,550, with top and front glass, two Solar No 1 gas headlights two Dietz Regal oil lights, tail light, horn with tube, and full equipment. \$2,450 without top and front glass.

Light Touring Car, \$1,450, having much the same outward appearance as our famous Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

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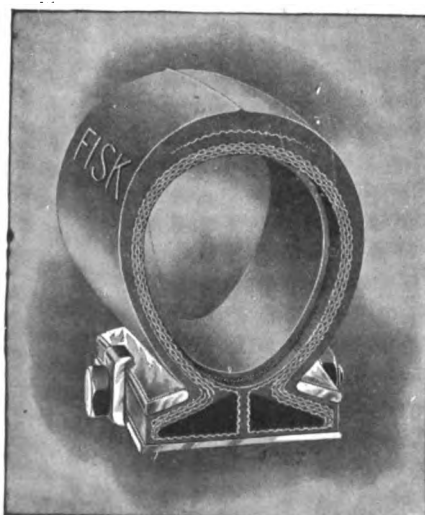
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NEW YORK, AUGUST 18, 1904.

As Insurance Men View It.

There is one class of men who view the automobile, and especially the pleasure automobile, with feelings quite the reverse of optimistic. We refer to insurance men, in their professional capacity; their view is likewise a professional one, and they are inclined to look upon the motor vehicle as an indifferent or even bad "risk," and to come to the conclusion that the less they have to do with it the better.

This attitude is not at all pleasing to users and makers of automobiles, but it is the one pretty generally taken. It is, therefore, interesting as well as depressing to learn that the pessimism felt is both deeper and more general than it was a year or two ago. Incidentally, it may be remarked that it does not apply to commercial vehicles; especially is this true regarding truck and other slow moving business wagons. As one insurance man put it to us, "It is these big touring

cars and other pleasure automobiles that we are afraid of, not the trucks; the latter are all right.

It is only within the last year or two that insurance men have turned their backs, so to speak, on automobiles as "good risks." Previous to that time they, or most of them, reserved judgment; and as the only way of determining the matter was to experiment, they wrote insurance, and now have in their possession facts and figures to give point and pertinence to their present contention, which is that the mass of automobile business is bad business, such as no conservatively managed company can afford to write save at rates which are practically prohibitive.

The case is put in a nutshell by those insurance men who hold this view. They cite the case of a company in this city which was formed not long ago to write casualty insurance. Naturally it was eager for new business, and it jumped at the chance of writing insurance on automobiles. There was plenty of it in sight, and at the prevailing prices it seemed tempting. Hundreds of thousands of dollars of it was written, and then the company awaited the result. It was not long in coming. Claim after claim was made in rapid succession; accidents of every description were reported, and the company was kept busy investigating them and paying the claims made on them. So heavy were these drafts that the premiums were soon swept away, leaving a large deficit, with an enormous amount of "risks" still outstanding.

Self-preservation demanded, or seemed to demand, action. It was soon taken, in the shape of the abolition of automobile insurance; and as this was not deemed sufficient the outstanding policies were cancelled and the premiums refunded.

This is, perhaps, an extreme case. The company referred to wrote a large amount of automobile insurance, and was, naturally, harder hit than others. Perhaps it was less careful in scrutinizing the character of the insurance offered it. All insurance companies have not suffered to such an extent, nor have they taken such a drastic step as to cancel this insurance. The automobile owner who wishes insurance, whether accident or casualty, can still get it without difficulty and at the regular terms. There is little probability that he or his car will ever be barred from the list of insurable articles.

But there is not an iota of doubt that more than one insurance company has paid dearly for the experience it has acquired in insuring automobiles, and that there is a general

disposition in insurance circles to write less business of this character. Furthermore, the business of the future will be more closely scrutinized. The character of the applicant and his reputation as a safe, careful and reasonable driver will be closely looked into, and the application of the motorist with a record of accidents will be turned down without a moment's hesitation.

All this will be a blessing to the sane, sensible motorist, the man who does not have accidents.

Freight Charges and Profits.

In a Metropolitan salesroom hangs a neatly printed and framed sign, which reads that all cars are sold f. o. b. factory. It is not an empty form. All sales are made on the terms stated; the customer pays the freight, either in the shape of a fixed, round sum, or the precise pro rata of the amount charged by the railroad company for the carload of machines in which the one purchased is included.

A very fair proportion of dealers all over the country have this season made a practice of selling cars with freight charges added. A much larger number would like to follow their example and are deterred only by timidity; they fear objection on the part of customers and a loss of trade due to the willingness of rivals to waive the freight charge. If all dealers sold cars f. o. b. at factory, the timid ones would be well content. But they are disinclined to risk anything, and the result is that the great majority of sales are made delivered at the store.

In a conversation with a prominent New York dealer recently, the case of the f. o. b. factory advocates was set forth. It was, in brief, that the average retailer had hard work enough to make both ends meet, let alone acquire a profit on the season's trading. His expenses are heavy and are incurred throughout the year, while the selling season is a very short one, the bulk of the sales being made in four or five months. On the other hand, the profit on the goods marketed is small—too small, the speaker said—and is further reduced by the necessity for doing work gratis in order to keep customers in a good humor. Even with a large turnover, therefore, the dealer was lucky to make more than a bare living, and he was justified in seizing upon any legitimate method of obtaining additional revenue.

In a season like the present one, where delayed deliveries resulted in many lost sales, more than one dealer sees in the

freight charge the only hope of turning a deficit into a profit. Consequently, he clings to the practice with tenacity and will not forego it until driven into the last ditch and actually forced to do so.

Cure for Bulky Autos.

Well posted horsemen aver that there is no sure cure for a balky horse. Many times anxious race officials have reached the same conclusion regarding balky automobiles. Certainly no certain method of inducing them to run seemed to be available. But out in Terre Haute, Ind., a remedy at least, if not a cure, appears to have been discovered, and it was applied to good effect, as far as promises went.

It appears that one Jed Newkirk, an erstwhile cycle racing man of more or less prominence, was billed as the star of a meet that was to be held. He and his even more famous "999" car were booked to annihilate all existing five-mile records, and the six thousand people assembled at the track were on the qui vive to witness this fearless chauffeur guide the snorting red devil in its space devouring flight around the track.

But, alas and alack! the "999," as on so many other untoward occasions, balked at the critical moment and refused to devour. The officials implored, the audience importuned and clamored, Newkirk coaxed, but the monster remained obdurate. Thus far there was nothing either new or startling; these features were to come. The crowd became so angry that some action seemed to be called for, and the officials had Newkirk arrested and threatened with durance vile. Thereupon he weakened and promised to give a free exhibition the next day, darkness having intervened. He was then released, but his pay for the exhibition which did not come off was withheld.

It will be noticed that Newkirk's promise had no string tied to it. He agreed to race the "999" the next day, balk or no balk; and it is quite likely that, with the prospect of prison and no money ahead in case of a second fluke, he will "make good."

Lessening Railroad Crossing Dangers.

Ever since steam railways have played a prominent part in the world's affairs, the grade crossing has been a terror and a menace to users of the public highways. Its malignant influence has been felt everywhere, and millions of dollars have been and are being spent to obliterate them. In some sections—mainly in the East, and particu-

larly in the neighborhood of large cities—considerable progress has been made in the desired direction. But there still remain thousands of crossings at grade, and every year they add their quota to the ghastly total of railway accidents.

With the coming of the automobile the grade crossing assumed fresh terror. The swiftly moving machines make the admonition, "Stop, look and listen" one the heeding of which is irksome to a degree. The noise of the car renders it more difficult to detect the presence of an on-rushing train. The result has been a succession of accidents the harrowing details of which have been related at length in the dailies.

Quite aside from the undesirability of grade crossings, which is certain to lead to their ultimate abandonment, there are certain features which impress themselves upon any one who studies the matter. Usually the blame for these accidents is placed upon the victim if he happens to be driving. It being held that he did not take the necessary precautions before crossing. While this undoubtedly is true in some cases, yet it is safe to say that by far the greater number occur owing to the fact that the driver of the automobile is entirely unaware of the existence of the crossing until it is too late to stop, even though he is going at only a moderate rate of speed.

With the development of the automobile, and the improvement of country roads, the danger of grade crossings has greatly increased. More people are using highways with which they are unacquainted, and are unaware of the presence of these death traps. Furthermore, as an automobile travels faster than horse-drawn conveyances, where a crossing is hidden by trees, houses or a sudden turn of the road, the automobilist cannot see them until too late. At night these crossings, even on prominent thoroughfares, are often without any light being displayed to warn one of their presence.

Undoubtedly, grade crossings will some day be eliminated, but this, like road improvement, is slow, and some means should be devised to lessen their dangers in the meantime.

One thing that could easily be done would be to place a large, prominent sign in a conspicuous place on the side of the road, or where it would be plainly seen, some three hundred or four hundred feet before the crossing is reached. Large white signs, in the form of an X, could be seen even at night, though it would be far better to dis-

play a red or green light on the sign after sunset.

Railway engineers, or motormen, are always warned of crossings, curves, etc., some time before these places are reached, and if this same practice were adopted on our highways, it is safe to say that automobiles would cease to be run down, or, as recently happened on the tour to St. Louis, run into trains. A sign or light, placed right at the crossing, as is the practice now, is of little service where the road crosses the track at a sharp turn, or where the view is obstructed.

Rural Mail Carriers Use Autos.

One of the great utilities to which the automobile is destined in the future is that of rendering rural free delivery simple, speedy and general.

The initiative has been taken here and there by carriers, who, left to select their own vehicle, have chosen a motor car. Where it has been tried it has resulted in great delight to those receiving their mail from a carrier travelling by motor car, and satisfaction to the deliverer, who has been able to finish his task much earlier than before.

In New Jersey, Massachusetts and parts of other States road improvement has progressed far enough now for automobile delivery to be more generally introduced, and doubtless it will be ere long.

The question is, Are the manufacturers ready for the call?

Lest their streets be totally ruined by the drippings of grease and oil from automobiles the Joliet, Ill., Council have ordained that all such vehicles shall hereafter be fitted with drip pans. As the drippings usually come from the running gear, however, it is not easy to see how they can all be caught. A plentiful supply of drip pans will be necessary to catch all the drippings.

It is pertinent to ask whether the running gears of horse drawn vehicles ever drip, and whether they must be peppered all over with pans to catch the overflow.

General Booth, of the Salvation Army, has begun an evangelistic tour in an automobile. Judging from the descriptions of how he and his followers "whiz into town in a cloud of dust," he is likely to land in the clutches of the law.

Reginald Vanderbilt and a party of friends in an automobile were stoned last Friday night. Now Newporters carry firearms when they go out in motor cars.

New Records Made at Long Branch Fete.



H. S. HARKNESS (MERCEDES) AND E. E. HAWLEY (MERCEDES) IN A ONE-HALF MILE RACE ON THE OCEAN DRIVE.

On Monday the first annual automobile carnival, to be held at Long Branch, N. J., was begun with straightaway races in the Ocean Boulevard, over a half-mile course between the old Ocean House and the West End Hotel. The races brought out a crowd of four thousand or five thousand, who were lined up along the roadside, or ensconced on the piazzas of the hotels and cottages; and, while there was nothing very thrilling about the contests and not much fast time, the programme served excellently as a curtain raiser for the other events to follow—races on the track and a parade.

The fastest time of the day was made in the free-for-all event, at half a mile, which was the greatest distance of any event, in which two 60-horsepower Mercedes competed. These were the machine of H. S. Harkness, driven by himself, and that of E. R. Thomas, driven by his chauffeur, Edward Hawley. These scooted over the hard, gravelly road at close to a mile a minute, to the imminent danger of a lot of unsophisticated spectators, including irrepressible small boys, nursemaids and children, and the officials were heartily glad when this race was over. The crowd was composed almost entirely of the summer residents of the Jersey shore, and in the crowd pretty girls in summery gowns, staid mammas and children were preponderant. The majority of them were unfamiliar with automobile racing, and prone, as all the inexperienced are, to underestimate the speed of the moving vehicles. The local police were disgracefully incom-

petent and lax, so that the crowd was not kept to the sidewalks. Every now and then girls and children crossed the road when a race was on, and bicyclists were allowed to ride up and down the course, the police meanwhile gaping at the racers. There were several narrow escapes from accidents, but only one casualty. This was the killing of a dog by the car of H. S. Harkness.

The carnival was arranged under the patronage of a coterie of summer residents, mostly automobilists, who selected W. J. Morgan to manage affairs, and for the car-

rying out of which the New Jersey Coast Automobile Association was formed.

The racing began shortly after 3 p. m., the start being near the old Ocean House, and the finish near a grandstand on the grounds of the West End Hotel. The electrical timing apparatus of A. L. McMurtry was used with excellent result, the quarter miles being recorded in all events, as well as the times of the cars that finished second and third, and yet all the while the timers could converse one with another without interrupting the work of the timing apparatus. The day's work was a splendid exposition of the efficiency of this timing system.

The road was hard, but bumpy in places, and it was not strictly straight. The slight curve of the road along the course did not bother the drivers so much, however, as did a sharp turn a hundred yards from the finish, which was reached before speed could be lowered much, and around which the cars skidded in alarming fashion. There was a stiff wind blowing along the course in the faces of the racers. The entries for the events were largely drawn from the summer sojourners, and the local tradesmen. The races were all run "best two out of three heats," with the first heat from a standing start and the others from a flying start. Although they were not so scheduled, two of the events proved to be races for cars all of one make.

The first race called brought three Oldsmobiles to the tape. The race required three heats to decide it, and the finishes were close. In the first heat the second car was only four seconds behind the first; in the second heat the second car was only three-



TIMING APPARATUS AT THE STARTING POINT.

fifths of a second behind, and in the third there was a difference of only 52.5 seconds between the first two.

The quarter-mile race also required three heats to decide it, and a fourth was run owing to no time being taken for the third. When the timers at the start left to go to the quarter-mile post to start this race, the keyboard at the start was unguarded, and the spectators began to play with it, to the utter confusion of the timers. The fourth heat was also untimed, owing to a misunderstanding. The finishes in this race were close, the victory being gained by the margin of about two lengths.

In the race for cars costing from \$2,000 to \$3,500, a Renault machine, entered by Lewis M. Bloomingdale, of West End, was thrown out, because of its price. In this race Joseph Tracy, in a big Royal touring car, carrying its tonneau, scored an easy victory over the Berg and the Meteor, which were outclassed in horsepower, the Royal having an engine of 36 rated horsepower and reported to be much more powerful than that. The Berg and the Meteor cars of the Worthington Automobile Company, made such a close race of it for second place that an extra heat had to be run to decide which should have the second prize.

Edward Hawley, driving the E. R. Thomas Mercedes, scored a very positive victory over H. S. Harkness and his car, beating him by about 75 yards in both heats. When Mr. Harkness first drove over the course to the start, a little girl ran across the road in front of the machine, and every one had a scare. Mr. Harkness seemed nervous from that moment on. In the first heat a black French poodle ran in front of the Harkness car after it had crossed the finishing line and was killed in an instant, the wheels passing over its body.

The half-mile race for electric cars was a sort of floral parade, with a dog show combined. There were four vehicles in the race, two of them driven by women, and these machines, as well as the high, two

seated brake driven by C. C. Miller, were decorated with flowers and ribbons. On the seat beside Mr. Miller rode his black and white terrier, as dignified as his master. After the speeding of the other cars, the pace of the electrics seemed funeral. Mrs. Miller and Mrs. McMurtry had a really close race of it, however, Mrs. Miller win-



A TRIO OF OLD-TIMERS—E. C. BALD, W. J. MORGAN AND A. A. ZIMMERMAN.

ning by a few seconds each time. The men in the race seemed to be gallantly leaving the struggle to the ladies, and the order of finish was the same in both heats.

Summary:

Half-mile (best two in three); stock machines costing \$650 or under—First heat won by H. L. Lewis (Oldsmobile); John Hansen (Oldsmobile), second; F. W. Stockbridge (Oldsmobile), third. Time, 1:23. Second heat won by F. W. Stockbridge; H. L. Lewis, second. Time, 1:11. Third heat won

by H. L. Lewis; F. W. Stockbridge, second. Time, 1:23.

Half-mile free-for-all (best two in three)—First heat won by E. R. Thomas (Mercedes, driven by Edward E. Hawley; time, 35 seconds); Harry S. Harkness, second (Mercedes; time, 40 2-5 seconds). Second heat won by E. R. Thomas (Mercedes; time, 31 4-5 seconds); Harry S. Harkness, second (time, 34 3-5 seconds).

Half-mile (best two in three); stock machines costing from \$2,000 to \$3,500—First heat won by Joseph Tracy (Royal; time, 51 3-5 seconds); Frank Sibley second (Berg, 53 3-5 seconds); H. R. Lounsberry, jr., third (Meteor). Second heat won by Joseph Tracy (time, 45 3-5 seconds); R. R. Lounsberry, jr., second (time, 57 seconds); Frank Sibley (Berg), third. Extra heat to decide second place won by Frank Sibley (Berg).

Half-mile (best two in three); for electric machines—First heat won by Mrs. C. C. Miller (Waverley); Mrs. A. L. McMurtry (Waverley), second; C. C. Miller (Woods), third; Arthur Courdier (Studebaker), fourth. Time, 2:03 1-5. Second heat won by Mrs. C. C. Miller; Mrs. A. L. McMurtry, second; C. C. Miller, third; Arthur Courdier, fourth. Time, 1:57.

Quarter-mile (best two in three); for machines between \$650 and \$1,600—First heat won by J. F. Johnson (Franklin); Richard Degray (Franklin), second; F. W. Stockbridge (Franklin), third. Time, 44 seconds. Second heat won by Richard Degray; J. F. Johnson, second; F. W. Stockbridge, third. Time, 35 3-5 seconds. Third heat won by Degray; Johnson, second; Stockbridge, third. No time. Fourth heat won by Degray; Johnson, second; Stockbridge, third. No time.

In connection with the carnival of racing and parading, there was an automobile show opened on Monday in the West End Rink, adjoining the hotel, to continue during the week. The exhibition was in charge of C. H. Munger, and while it was not a very extensive affair, no one could complain, because there was no charge for admission.

Among the exhibitors were:

The Worthington Automobile Co., of New York, showing Berg and Meteor cars.

The Hartford Rubber Works Co., showing the Perfected Dunlop and the Hartford Clincher tires.

The Samson Leather Tire.

The Duerr, Ward Co., of New York, showing Royal cars.

Smith & Mabley, of New York, showing the Mercedes.

The American Automobile Storage Co., of New York, showing Oldsmobiles.

Peter Fisher, of New York, showing the Matheson car.

The Packard Motor Car Co.

The Elberon Automobile Co., of Elberon, N. J., showing the Durkopp car owned by C. C. Miller.

The Motor Car Co. of New Jersey.

The United Electrical Mfg. Co., of New York, showing Crescent dry batteries,



RACE FOR \$650 CARS. OLDSMOBILES TO THE FRONT.

WEDNESDAY'S EVENTS.

For Tuesday there was nothing on the programme, but on Wednesday there was a card of races run off on the old driving track at Elkwood Park.

There was a good attendance, and in spite of the poor condition of the track there was a record breaking performance by H. S. Larkness, with his Mercedes, of 60 horsepower.

Joseph Tracy, driving a Royal, and Edward Hawley, driving E. R. Thomas's 60-horsepower Mercedes, started with Mr. Harkness in a 100-mile race, but both the others dropped out, so Mr. Harkness quit at sixty miles, after having established new records from the twenty-sixth miles on. For twenty-five miles he was well under the old record of 31:44 1-5, made by Fournier at Fort Erie, in 1901, but as these figures were lowered to 26:42 by Oldfield at Buffalo on Monday, Harkness will get credit for records only from twenty-six to sixty miles, inclusive. Harkness's time for twenty-five miles was 28:30 2-5. His time for fifty miles was 1 hour, 1 minute, 23 1-5 seconds. The former record for fifty miles on the track was 1 hour, 17 minutes, 50 seconds, made by Alexander Winton at Chicago on September 18, 1900.

At the start of the race Tracy had the pole and Harkness was on the outside. The latter got the lead at the start, but was so closely followed by Hawley that it seemed that the two cars would crash at the first turn. Hawley stopped after the first mile, asserting that Harkness had fouled him on the turns. The judges took no action on the protest, and Hawley continued in the race for about thirteen miles, when he dropped out with the explanation that the dust was so heavy that he could not see. Tracy kept on for thirty-six miles, when he, too, stopped. Harkness's only stop—at the forty-sixth mile—was to take on water. His fastest mile was the fifty-fifth, which he covered in 1 minute 5 seconds, and his slowest the forty-seventh.

Hawley beat Harkness in the three-mile race for machines costing from \$5,000 to \$15,000, and in the one-mile free-for-all, best two in three heats. In the three-mile race, however, although Hawley crossed the tape first, Harkness got the decision, as 10 seconds' handicap was allowed him because his machine was driven by its owner. Hawley was one hundred yards ahead, though.

Hawley's time for the three miles was 1:07, 2:13 and 3:18. He made a protest after the race, and it was decided to give him a gold medal. In the one-mile race Hawley won two straight heats, each by twenty-five yards. His time for the first heat was 1:06 2-5; Harkness's time was 1:09 3-5. Hawley covered the second heat in 1:05 4-5 and Harkness in 1:10 2-5.

The five-mile pick-up race, for cars carrying four passengers, was an innovation. At the end of each lap the machine had to stop and take on a passenger until four were aboard. Charles R. Greuter, of Holyoke,

Mass., in a Matheson car, won in 8:48 2-5. A. Murray, of Long Branch, in a Panhard, was second, in 9:46 2-5.

James D. Marston, of New York, gave an exhibition mile motorcycle race on a French Alcyon, covering the distance in 1:46. He also paced Frank Deterling, who rode a bicycle for a mile. The time was 2:10 1-5.



H. R. WORTHINGTON AND W. J. P. MOORE, OF THE WORTHINGTON COMPANY.

Summaries:

One mile (best two in three heats), for machines costing \$650 to \$1,000—Won by R. Newton (Autocar); L. W. Lord (Pope-Hartford), second; Arthur S. Winslow (Cadillac), third. Fastest heat, 1:50 3-5.

Three miles, for machine's costing \$5,000 to \$15,000 (if driven by owner, 10 seconds' handicap allowed in each mile)—Won by H. S. Harkness (Mercedes); E. R. Thomas (Mer-

cedes), driven by Edward E. Hawley, second; Charles R. Greuter (Matheson), third. Time, 3:28 1-5.

Motorcycle trial—James D. Marston (Alcyon). Time, 1:46.

Five-mile pick-up race, for cars carrying four persons, driver to pick up one person at end of each mile—Won by Charles R. Greuter (Matheson); A. Murray (Panhard), second; H. R. Lounsbury, jr. (Meteor), third. Time, 8:48 2-5.

One-mile free-for-all (best two in three heats)—First heat won by E. R. Thomas (Mercedes); H. S. Harkness (Mercedes), second. Time, 1:06 2-5. Second heat won by Edward E. Hawley; H. S. Harkness, second. Time, 1:05 4-5.

One hundred mile race to establish track records—Won by H. S. Harkness (60-horsepower Mercedes), at the end of sixty miles, all other contestants having withdrawn; Joseph Tracy (36-horsepower Royal) covered 36 miles; E. R. Thomas's 60-horsepower Mercedes, driven by Edward E. Hawley, covered 12 miles. Harkness covered 60 miles in 72:40 3-5. His fastest mile was 1:05.

Harkness's time by miles was:

	M. S.		M. S.
1	1:11 3-4	31	35:16 3-5
2	2:19	32	36:24 2-5
3	3:27	33	37:33 2-5
4	4:35	34	38:42 1-5
5	5:43	35	39:51 1-5
6	6:50	36	40:59
7	7:59	37	42:06 1-5
8	9:07	38	43:14 2-5
9	10:15 3-5	39	44:22 2-5
10	11:24 2-5	40	45:30 2-5
11	12:32 2-5	41	46:48
12	13:41 1-5	42	47:45 4-5
13	14:49	43	48:53 2-5
14	15:57 1-5	44	50:01 2-5
15	17:06 2-5	45	51:08 4-5
16	18:14 2-5	46	52:18
17	19:24 1-5	47	53:00 2-5
18	20:32	48	54:16 1-5
19	21:40 2-5	49	1:00:16 1-5
20	22:48	50	1:01:23 1-5
21	23:56 2-5	51	1:02:30
22	25:04 2-5	52	1:03:37
23	26:12 3-5	53	1:04:53 2-5
24	27:22 1-5	54	1:05:59 2-5
25	28:40 2-5	55	1:07:04 2-5
26	29:37 3-5	56	1:08:11 1-5
27	30:45 2-5	57	1:09:18 3-5
28	31:53 1-5	58	1:10:26 3-5
29	33:01 2-5	59	1:11:23 3-5
30	34:09 1-5	60	1:12:40 3-5



JOSEPH TRACY (ROYAL) IN THIRD EVENT.

HIGH SPEED NO OFFENSE

So Declares Colorado Judge — Complainant Must Show Negligence to Recover Damages.

"High speed in automobile driving is not regarded as a matter of civil law, and becomes such only when, from the circumstances of the case it appears by a preponderance of evidence that the person operating the automobile did not use that degree of care which a person of ordinary prudence would have used in a like case.

"Horses often are frightened by locomotives and similar vehicles in both town and country, but it would be as reasonable to treat a horse as a public nuisance on account of his tendency to shy and be frightened by unaccustomed objects as to declare an automobile a public nuisance from its tendency to frighten horses."

The foregoing were some of the interesting instructions given to the jury in the Denver, Col., County Court by Judge Ben B. Lindsey in the test case of E. F. Burden against George W. Wood, which was brought for the purpose of securing adjudication on the exact limit of responsibility of automobile drivers to horsemen.

Burden brought the suit about a year and a half ago to secure \$400 damages for a runaway in Littleton, and the case has been bitterly contested by Attorneys Rogers, Cuthbert and Ellis, who were engaged to fight the test case. The jury awarded Burden a verdict of \$175, but the case will probably be appealed or a new trial sought.

The principal points brought out are that civil liability for damages in such cases depends upon the negligence which may be shown by the evidence adduced, and does not depend merely upon the speed with which the automobile is driven, if it is under control and not negligently handled. Where speed limiting ordinances exist, criminal liability depends upon their provision. The instructions granted by the court at the instance of both Ralph Talbot, attorney for the plaintiff, and W. T. Rogers, for the defendant, are very interesting. They were, in part:

"While automobiles are lawful means of conveyance and have equal rights upon the public roads and **highways** with horses and carriages, their use should be accompanied with that degree of prudence in management and consideration for the rights of others as is consistent with safety, and if the defendant knew, or by the exercise of ordinary care could have known, that the automobile under his control had so frightened the plaintiff's horses as to render them unmanageable, it was his legal duty to have stopped his automobile and to have taken such other steps as ordinary prudence might have suggested.

"If the jury believe from the evidence that at the time and place of the injury to the plaintiff's horses the defendant was operating the automobile at a high rate of speed,

and that because of that high rate of speed, together with the noise proceeding from the automobile, the horse of the plaintiff became frightened and unmanageable and beyond his control, and if the jury believe that the high rate and operation of the automobile was an act of negligence, the jury should find for the defendant."

Some of the instructions given for the defendant were:

"If the motor carriage was practicable for the purpose of travel or the noise or vapor caused by its use was kept within reasonable limits and was no greater than in the case of other motor carriages that have been found adapted to the use of the general public, the defendant can be held liable only upon showing of negligence in operation.

"A highway is a public way for use of the public in general for the passage of traffic without distinction; it must admit of new methods of use whenever it is found that the general benefit requires them, unless negligently used. Electric streetcars have caused many runaways; automobiles operated by steam, by storage batteries or by gasoline engines running at a moderate rate of speed may cause fright to horses unused to them, and the driver must take his chances. Steam and other power vehicles are permitted upon the streets as a matter of necessity, and while horses of ordinary gentleness might be at first liable to take fright, after a time they become accustomed to objects that are at first fearful to them. The jury is instructed that horses may take fright at conveyances which have become obsolete as well as at those which are novel, but this is one of the dangers incident to driving or to the use of horses upon the highway.

"The coincident use of horses and automobiles may impose upon the respective managers the obligation of additional care and vigilance beyond what would otherwise be essential, but neither the owner of the horse nor the owner of the automobile has exclusive or superior privileges."

Colorado Men on Long Tour.

Four Colorado Springs (Col.) men are planning a four thousand mile automobile trip. They are W. W. Price, L. G. Carlton, H. T. Lowe and Dr. S. R. Bartlett. They left for Cleveland, Ohio, on August 15, where, on August 20, they will begin a four thousand mile automobile trip throughout the South and West. A new Winton car has been ordered by Mr. Price, and will be used in making the trip. The party will return to Colorado by October 1, taking in Indianapolis, St. Louis and other large cities in the West.

Averill Heads Cedar Rapids Club.

At the annual meeting of the Cedar Rapids (Iowa) Automobile Club, held last week, the following officers were elected: President, Glen M. Averill; first vice-president, R. P. Taylor; second vice-president, O. W. Lyman; secretary G. L. Rothrock; treasurer, J. L. Bever, jr.; directors, G. M. Averill, R. P. Taylor, O. W. Lyman, G. L. Rothrock, O. O. Brandenburg, J. L. Bever, jr., and W. G. Haskell.

SPACE FOR PARIS SHOW

Municipality Offers Conservatory to A. C. F. and it Will be Used as an Annex.

The sorely needed and long sought additional space for the Paris show has been found, and the forthcoming function, which takes place December 9-25, will be less crowded than it has been for a number of years.

It appears that the magnificent conservatories installed by the city of Paris on the Cours de la Reine are not much used at present, so at its last meeting the Municipal Council decided to place them at the disposal of the Automobile Club of France. The latter has decided to utilize these conservatories for the next grand annual exhibition. They will make an annex to the Salon, which will be exclusively reserved for machines moved by motive power, which cannot be demonstrated in the Grand Palace.

In all, fifteen classes of exhibits are provided for in the exhibition.

Vanderbilt Cup Race Entries Wanted.

Entries for the Vanderbilt Cup race have not been coming along as expected, and Chairman A. R. Pardington of the A. A. A. racing board has sent out a notice stating:

"The entries for the Vanderbilt Cup race will close absolutely on September 8. When entries are sent in they should be accompanied by a letter signed by the secretary of the automobile club which the cars will represent in competition.

"At the present time four entries are declared, entry fees being paid and nominations made, viz., White Sewing Machine Co., 2; Panhard-Levassor people, 2. It is expected that the Napier people, through Mr. S. F. Edge, will enter two cars, and correspondence is now being held with Mr. Edge to this effect.

"It is hoped that the American manufacturers will avail themselves of this opportunity for placing themselves in competition on home soil, against the products of the best foreign manufacturers."

Warrant for Jersey Shooting Farmer.

The Automobile Club of Philadelphia is co-operating with the Automobile Club of America in the effort to check the assaults upon automobilists along the road from Camden to Atlantic City, N. J.

Secretary Butler went to Hammonton recently and there had a warrant issued for the farmer who discharged a shotgun at Mr. Meyers at that place on August 6. The culprit, however, took to hiding, and has not yet been apprehended. The Automobile Club of Philadelphia is keeping track of the case.

Form Club at Buenos Ayres.

Buenos Ayres (Argentina) motorists have organized a club under the name of the Argentina Automobile Club. A committee has been appointed to arrange races for November next.

BUFFALO'S FIRST MEET

Big Crowds Attend Two Days' Racing—Oldfield Captures Races and Records.

Buffalo stepped into the automobile racing field last Friday and Monday with great gusto and success, when the first meet there was held on the Kenilworth track.

The contests of Friday were preceded by a parade from the City Hall to the track. The attendance was about five thousand, the enthusiasm plentiful and the races were run off without mishap.

One of the features of the parade was the presence of E. R. Thomas in his first 1905 model.

The feature race of the day was a five-mile event for the challenge cup presented by the Diamond Rubber Co., in which Barney Oldfield, with his new Peerless racer; H. H. Lyttle, in his Pope-Toledo; W. F. Winchester, with a Franklin, and George Graham, with a Winton, were entered.

Oldfield took the lead at the start, and around the turn he went on two wheels, closely followed by Lyttle, Winchester and the Winton. On the back stretch Lyttle shot ahead and retained a lead of thirty yards until half the distance had been run, when Oldfield, with reckless daring, nosed him out of the pole and took the lead. Rounding into the stretch at a terrific pace, Oldfield was twenty yards to the good. He increased the lead considerably, and finished 150 yards ahead of his rival. The five miles was run in 5:10.

Later in the day Oldfield gave an exhibition run of a mile and established a record of 58.2-5 seconds for the track.

The summaries:

Five-mile motor cycle race—Frank Robertson, first; S. B. Eagan, second; J. S. Willet, third. Time, 7:17.2-5.

Ten miles, for cars of any motive power, weighing from 881 to 1,432 pounds—W. F. Winchester (Franklin), first; F. Kulick (Ford), second. Time, 12:24.2-5.

Five miles, touring cars, with full road equipment and four persons—C. P. Soules (Pope-Toledo), first; H. H. Lyttle (Pope-Toledo), second. Time, 6:40.1-5.

Two miles, for Ford cars—Charles F. Gilmore, first; F. C. Carter, second; Emil Burkhardt, third. Time, 3:29.2-5.

Motor-cycle exhibition, two miles, by Mrs. Rogers. Time, 3:28.1-5.

Five miles, for cars of any motive power, weighing from 551 to 881 pounds—W. F. Winchester (Franklin), first; F. Kulick (Ford), second. Time, 5:34.

Two miles, for Orient buckboards—E. R. Durkee, first; L. H. Roberts, second; Homer Scott, third; J. R. Wilson, fourth; J. H. Betts, fifth; M. Fisher, sixth. Time, 4:10.

Five miles, free-for-all, for Diamond Rubber Company's challenge cup—Barney Oldfield (Peerless Green Dragon), first; H. H. Lyttle (Pope-Toledo Tornado), second; W. F.

Winchester (Franklin), third; Charles Graham (Winton Bullet No. 3), fourth. Time, 5:10.

Two miles, for Cadillac cars—M. Fisher, first; R. H. Yates, second; Jim Johnson, third. Time, 3:48.2-5.

Two miles, for Oldsmobiles—F. C. Carter, first; E. Jaynes, second. Time, 5:03.2-5.

One-mile exhibition by Barney Oldfield (Peerless Green Dragon). Time, 0:58.2-5.

Five-mile exhibition—Charles S. Schmidt (Pacard non-stop record car). Time, 7:15.1-5.

Owing to rain on Saturday the events scheduled for the second day were run on Monday, and there was a bigger crowd present than on Friday.

Interest was centred in the fifteen-mile free-for-all race, in which it was expected that Oldfield, Graham, Lyttle and Paxon would meet. However, an accident to Lyttle's car prevented him from starting, and Paxon, for some reason or other, declined the issue, and this left the event at Oldfield's mercy. Graham started, but was outclassed by Oldfield, who lapped him two miles and a quarter in the fifteen-mile race. At that the Winton made a good showing.

Two world's records were broken on Monday—the twenty-five-mile mark for light machines held until then by Fournier and made three years ago, and the twenty-five-mile heavy machines. Driver Schmidt made a successful attempt to beat the mark of 31:44.1-5 which has been held for some time by Fournier. He succeeded with his Grey Wolf, covering the distance in 28:32.1-5. After he had accomplished this Oldfield said he would attempt to beat it, and broke the record only a short time after in connection with his winning race in the free-for-all event. He won that race at fifteen miles and then kept on and established a mark of 26:42 for a heavy machine. He started off at a slow pace, but gradually made the oval in faster time, and covered the last one in 59¼ seconds. The time for miles, which follows, will show how he gradually increased the pace:

1:14.1-2, 1:14.1-2, 1:09.1-2, 1:06, 1:04.1-2, 1:04.1:05.1-4, 1:05.1-2, 1:05.1-4, 1:02.4-5, 1:02.1-4, 1:04, 1:03, 1:02.1-2, 1:03.1-4, 1:03.1-2, 1:02.1-4, 1:02.4-5, 1:01.3-4, 1:01.1-2, 1:01.3-4, 1:01, 1:02, 1:00.4-5, 0:59.1-4.

Schmidt's time is still the record for light machines. Schmidt's car weighs but 1,395 pounds, and is 24 horsepower, while Oldfield's car is 80 horsepower and weighs 2,200 pounds.

The Buffalo Handicap, an affair at five miles, proved to be an interesting event. It was for cars owned in Erie and Niagara counties, and seven faced the starter for the word. The race was a hot one from start to finish, and was captured with three-quarters of a mile handicap.

The summaries:

Two-mile race for Franklin machines—F. W. Allinger, owner, first; John W. Gibbs, owner, second; W. H. Baker, owner, third. Time, 3:38.2-5. H. C. Wilcox, owner, and Frank Carter, owner, also started.

Two-mile race for Pierce automobiles—George Coventry, owner, first; A. J. Keller, owner, second; F. Dey, owner, third. Time, 4:44.

Two-mile race for Rambler automobiles—F. C. Carter (I. N. Stewart, owner), first; O. E. Yeager, owner, second; M. M. Wall, owner, third. Time, 3:33.1-5.

Attempt to break the twenty-five-mile world's track record of 31:44—Schmidt. Time, 28:32.1-5.

Free-for-all race, fifteen miles—Barney Oldfield (Peerless Green Dragon), first; Cal Paxon (Thomas car), second. Time, 16:23.3-5.

Attempt by Barney Oldfield to break the twenty-five-mile record for heavy cars—Time, 26:42.

Two-mile race for Thomas automobiles, full road equipment, one passenger in addition to driver—Burt Thompkins, owner, first; Cal Paxon, owner, second; Jack Talcott, owner, third. No time taken.

Two-mile race for Haynes-Apperson machines, full road equipment, one passenger in addition to driver—F. F. Norris, owner, first; J. J. Gibson, owner, second; F. Munschauer, owner, third. Time, 3:54¼. Three started.

Great Buffalo Handicap, five miles, for cars owned in Erie and Niagara counties, full road equipment, cars to carry one passenger in addition to driver—Charles Toules, (three-quarters of a mile), first; Mack (scratch), second; W. A. Luz (scratch), third; C. H. Williams, F. C. Carter, Cal Paxon and Charles Gilmore also started.

Event No. 10, attempt to break the two-mile record by Barney Oldfield. Time, 2:04.4-5.

What One Race Cost.

It is stated by the Mercedes people that the Bennett Cup race cost them \$65,000, even allowing for the big prices obtained for the racing cars. They also say that next year they will build a genuine racing car. Up to the present their cars which competed could be adapted to the purposes of a comfortable touring car. The machine which will be built for 1905 will immediately after the race be stripped of the motor and sent to the scrap heap.

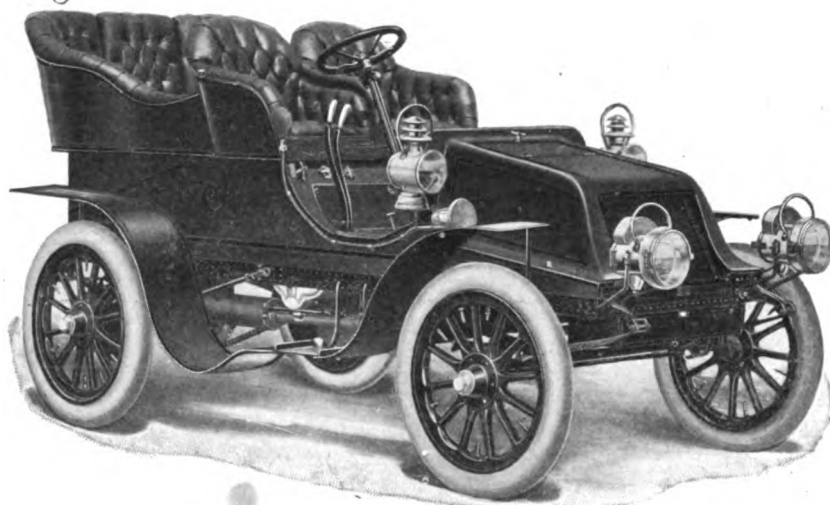
Entries for 1905 Cup Race.

Although more than nine months off, plenty of entries are assured for the 1905 Bennett Cup race. England was the first to issue a challenge to France, the holding country, and was speedily followed by Italy. Germany's entry is, of course, assured, and there seems no reason to doubt that Austria and Belgium will again be represented.

Course for German Trials.

It is stated by the secretary of the German Automobile Club that should eliminating trials be necessary for next year's Bennett Cup race, they will probably take place over the Schleswig-Holstein track, which is shorter than the Homburg course, and will, therefore, reduce the expenses.

WINTON



ASK FOR PROOF

OF WINTON SUPERIORITY AND WE POINT TO—

More 1904 WINTON Touring Cars in daily service than any other 1904 touring car;

A satisfied motorist wherever you find a 1904 WINTON Touring Car owner.

Our facilities for producing in great quantity enable us to produce at a price below competition a Touring Car that has no equal in quality.

Without top, \$2300 ; with top, \$2500 ; f. o. b., Cleveland.

PROMPT DELIVERY ASSURED.

WINTON AGENCIES EVERYWHERE



THE WINTON MOTOR CARRIAGE CO.

Member A. L. A. M.

CLEVELAND, O., U. S. A.

Branch Houses in New York, Boston, Philadelphia, Chicago and London.

Tourists Join in Automobile Day at Fair.



LINING UP ON THE BRIDGE AT EAST ST. LOUIS—CHAIRMAN POST AND PRESIDENT WHIPPLE IN LEAD.

St. Louis, August 11.—While the tour of the American Automobile Association to St. Louis can truly and emphatically be said to have been highly creditable to every car that finished, it is too much to say that it ended in a blaze of glory. The worst came last, as was told in the story telegraphed from here yesterday.

The cars continued to straggle into the city all day yesterday and throughout the evening, so that at midnight fifty-eight had arrived. Nine others arrived here to-day and five are

still giving battle to the mud between Springfield and East St. Louis.

Only four machines failed to complete the route, three of American and one of foreign make. R. P. Scott's seventy horse power car modelled on Peerless lines, was withdrawn at Toledo after having smashed into a train. E. H. Wallace's seven horse power Rambler broke a connecting rod and was withdrawn at Chicago. F. A. Benson's Oldsmobile, which entered the tour at Chicago, was burned at Pontiac, while Harlan W. Whipple's twenty-four horse power Mercedes

broke its main shaft on the last day's run and was shipped back to New York for repairs.

Charles J. Glidden, who completed here 17,677 miles in his world tour of fifty thousand miles to-day, summed up the success of the affair as being due to the splendid arrangements of the Tour Committee, the excellent work of the manufacturers and the skill of American drivers.

The performances of the small cars in the run was one of the remarkable features of it. The tour has demonstrated that good



JOLIET NATIVES INSPECT A PEERLESS CAR.



THE LAST DAY'S MUD; A NON-SLIP ATTACHMENT.



AFTER BEING RIGHTED, MEYERS' WINTON WAS READY TO RUN.

drivers who nurse their machines over rough roads and do not drive them to the limit of speed on smooth roads make the best averages in the long run.

In fuel consumption it is interesting to note that the foreign cars of Messrs. Glidden and Waters each required 135 gallons gasoline for the journey, while A. D. McLachlan's two cylinder Royal consumed only seventy-eight gallons. Harlan W. Whipple's Mercedes averaged only eight miles to the gallon, while C. H. Gillette's Pope-Hartford averaged eleven miles to the same quantity.

Mayor Silas Cook and Chief of Police George O. Purdy, of East St. Louis, acted as an escort to the automobile tourists, and welcomed them to East St. Louis yesterday. Policemen along the streets directed the tourists to the City Hall, where the machines were assembled on Main street, Missouri avenue and Third street.

A dense crowd surrounded the automobiles and plied the tourists with questions.

At 4 o'clock those that had arrived formed in line for the parade across Eads Bridge into St. Louis. It was 4:04 p. m. when the first car, bearing Mayor Cook, of East St. Louis, reached the St. Louis entrance to the bridge. Mayor Cook escorted the line from the Illinois to the Missouri side of the river. There was a momentary halt, while the mayor's auto dropped out and he gave way to President A. B. Lambert and the reception committee of the St. Louis automobile club, who headed the procession to the Jefferson Hotel. Across the bridge the machines whizzed along forty paces apart. At the entrance they closed ranks and moved in solid array up Washington avenue. An auto flying red and green pennants and carrying M. L. Downs and W. T. White, of Cleveland, president of the National Association of Automobile Manufacturers, darted hither and thither around the line, while Mr. Downs shouted orders through a megaphone.

At 2 o'clock to-day, Thursday, the tourists presented letters to Rolla M. Wells, Mayor

of St. Louis, from the Governor of New-York State and the mayors of cities through which the tour passed. M. L. Downs introduced the message bearers, who were James L. Breese, for Governor Odell; C. J. Glidden, for the Mayor of Boston; C. H. Gillette, for the Mayor of New-York, and the following for the mayors of the cities named: H. A. Warner, Poughkeepsie; C. H. Page, Worcester, Mass.; H. F. Lesh, Springfield, Mass.; A. A. Post, Albany; A. J. Seaton, Utica; H. C. Esselstyn, Syracuse; D. B. Huss, Buffalo; G. S. Waite, Cleveland; H. W. Whipple, Toledo; F. N. Mauross, South Bend, Ind.; A. B. Tucker, Chicago; J. M. Waters, Joliet; A. D. McLachlan, Pontiac; R. H. Johnston, Springfield, Ill.; S. Stone, Jr., Baltimore; W.

B. Saunders, Philadelphia; W. C. Hurlbut, Detroit, and W. C. Temple, Pittsburg.

All of the tourists from New York and Boston have reached St. Louis, the missing ones being principally from Chicago and the Northwest.

AUTOMOBILE DAY AT ST. LOUIS.

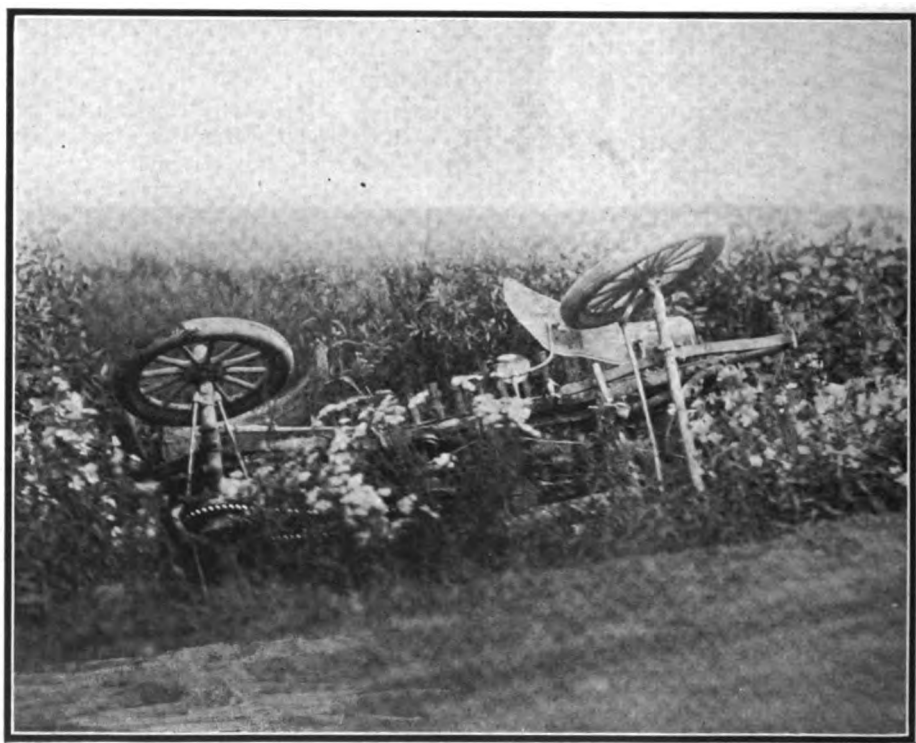
St. Louis, August 12.—To-day was automobile day at the fair and one of the most imposing arrays of motor vehicles ever seen anywhere rolled through the exposition grounds in parade.

Grand Marshal L. L. Fest was in the lead, with Major J. G. Hammond, of the Jefferson Guard. On the small seat in front of the marshal's auto was the bugler of the parade, Frederick Shepard, of Company E, of the 6th Illinois Regiment. Next came a Pierce twenty-four-horse power tonneau car operated by F. A. Nickerson, of the Pierce Company, and carrying Willard A. Smith, chief of the department of transportation, and General Edmund Rice.

The automobiles that followed were occupied by President Francis and chiefs of Exposition exhibit departments, prominent automobile exhibitors and other Exposition officials.

The procession of automobiles, led by a detachment of mounted police, left the Jefferson Hotel for the fair grounds at 1:30 and arrived at the State buildings entrance at 2:30 o'clock.

From the State buildings entrance to the front of the Palace of Machinery the Exposition party led the van. Here Well's Band, in three transit automobiles, was awaiting them, and fell in behind Mr. Fest's car. The procession then went up Louisiana way to the Administration building, where President



THE OVERTURNED CADILLAC NEAR LA PORTE, IND.



PASSING THROUGH FOREST PARK.

Francis, Mrs. Francis and Mrs. Perry Francis took their seats with Mr. Smith in the Pierce car. As the president's party came into sight they were greeted by a salute from the horn of every automobile in the parade.

The line then proceeded down Administration avenue, up the Pike, and around the

eastern part of the grounds to the Esplanade of the United States Government building.

Here the president's car and the other Exposition automobiles lined up, facing the government building, and reviewed the other autos as they passed. All the automobiles in the parade left the grounds by the Parade entrance.

In the line of parade were many machines driven by women.

Massachusetts Garage in Use.

While the formal opening is not expected to take place until fall, the new garage of the Massachusetts Automobile Club, Boston, is so nearly completed that it is now being made use of by the members.

The extension of the clubhouse by the addition of this garage was necessitated by the growth of the club, the old quarters proving quite inadequate for the accommodation of the cars that sought storage. The new part is devoted almost wholly to the purposes of a garage, although a section of one corner on the street floor has been fitted up as a ladies' room, and another corner, with the part formerly used as the ladies' parlor, is being used for the superintendent's office. The second and third floors are devoted exclusively to the storage of cars, and are fitted up in the same manner as the street floor, the large space being obstructed only by a few iron supporting poles. Around the walls are lockers for chauffeurs and owners of cars, and on each floor is a place for washing cars. The different floors are connected by a stairway and also by a large elevator, capable of handling the largest car now made. Cars may be run upon the elevator from the street floor or from the alleyway in the rear.

The club now has accommodations for about two hundred automobiles, which is about three times as many as could be taken care of in the old building.



PARADE IN THE EXPOSITION GROUNDS; REVIEWING AUTOMOBILES ON THE LEFT.

DETROIT MEET PROGRAM

Two Days Racing Will be Given on Grosse Pointe Track—List of Events.

Entry blanks have been issued for the fourth annual meet of the Detroit Automobile Racing Association, which takes place on the Grosse Pointe track, Detroit, Mich., on Friday and Saturday, August 26 and 27. Six regular events are carded for each day, to be followed by road trials and exhibitions.

The Detroit function, which has been aptly termed the Blue Ribbon meet, is one of the events of the year. The cream of the racing men are always found there, and enormous crowds gather to witness the first class racing which always results. Prizes ranging in value from \$75 to \$200 are given. As usual, the five mile race for the Manufacturers' Challenge Cup, donated by the Diamond Rubber Co., will be run. Entries close on August 25 with Secretary E. H. Broadwell, No. 254 Jefferson avenue, Detroit. The events are as follows:

Friday, August 26, 1904.

No. 1—Five mile, open. Cars any motive power under 1,432 pounds.

No. 2—Ten mile, open. Stock touring cars stripped. Any motive power or weight.

No. 3—Five mile, Manufacturers' Challenge Cup. (See conditions.) Diamond Rubber Co. (Open to manufacturers and their representatives. Cup remains in competition until won three times by one manufacturer or his representative. Must be three starters.)

No. 4—Five mile handicap, open. Standing start. Limit of handicap, $\frac{3}{4}$ mile.

No. 5—Five mile motor cycle race, open.

No. 6—Fifteen mile, open. Any motive power or weight.

Record trials and exhibitions.

Saturday, August 27, 1904.

No. 1a—Five mile, open. Cars any motive power under 1,432 pounds.

No. 2a—Detroit Owners' Handicap, five miles, open. Standing start. Limit of handicap, $\frac{3}{4}$ mile.

No. 3a—Ten mile, open.

No. 4a—Five mile motor cycle handicap.

No. 5a—Five mile handicap, open. Standing start. Limit, $\frac{3}{4}$ mile.

No. 6a—Ten mile, open. Any motive power or weight.

Record trials and exhibitions.

List of Sanctioned Meets.

S. M. Butler, secretary of the racing board of the American Automobile Association, announced this week that the following sanctions for race meets have been issued:

August 19 and 20, Cleveland Automobile Club, Glenville Track, Cleveland, Ohio.

August 21, George B. Sidener, St. Louis Fair Grounds Association Race Track, St. Louis, Mo.

August 26 and 27, Motor Club of Detroit, Grosse Pointe Track, Detroit, Mich.

September 16, Dutchess County Agricultural Society, Poughkeepsie, N. Y.

Races are to be held at Syracuse during the week of September 10 also, but the day has not yet been selected.

Erie Road Experiments with Autos.

Railroad men as well as automobilists are watching with interest experiments by officials of the Erie Railroad with a railroad automobile. Frederick D. Underwood, president of the Erie system, has for a long time believed that automobiles might be operated to advantage over railroad tracks, and two months ago began a practical test of his idea.

He turned over a large Winton car to the company's machinists with directions to equip it with flange wheels similar to those on cars and to make such other alterations in the gear as they found necessary. While the converted machine has made several trips over the Erie's lines, it does not work quite as well as Mr. Underwood desires. At present it is in the Erie's shops at Jersey City, where several alterations will be made in its machinery.

Other railroads, it is said, are working along the same lines. So far as is known, Mr. Underwood is the first man to run a passenger automobile over the tracks of a steam railroad.

"Hold-ups" to be Periodic.

It appears that the Boston wholesale "hold up" of motorists to see if they are complying with all the provisions of the newest Massachusetts blue law is to take place periodically. Judge Emmons has made such announcement—that the automobile inspections recently inceptioned are to be periodic.

It is proposed, in addition to inspecting the automobiles not yet examined by the police, to see to what extent those already recorded have remedied the defects the police discovered. The judge says that any owner found twice violating the law regarding the registration and equipment of his car will be summoned into court without further ado.

Ohio Motorists Catechised.

In order to get every automobile in the country in the county on the tax duplicates the Lucas (Ohio) County board of review is addressing letters to almost every man in Toledo. The communication begins, "How many automobiles do you own?" and goes on to inquire as to the kind, if any, its value, etc.

The board has reason to think that there are more automobiles in the county than the tax duplicate would seem to indicate.

Commuters Talk of Auto Line.

In the dire straits to which they have been reduced by the withdrawal of many local trains, commuters on the line of the New York, New Haven and Hartford Railroad out of New York are talking of using automobiles instead of steam car trains. The plan is to club together and run a line of automobiles between Mount Vernon, Yonkers, etc., and New York. It has not yet proceeded beyond the talk stage.

RHODE ISLAND'S ANNUAL

Providence Club Presents its Program for Meet on Narragansett Park Track.

Fifteen hundred dollars in prizes is offered by the Rhode Island Automobile Club at its forthcoming meet, to be held at Narragansett Park, Providence, September 10. The programme:

First race; free for all; distance, 10 miles. Prizes—\$300 first, \$150 second.

Second race; steam cars only; free for all; distance five miles. Prizes—\$100 first, \$50 second.

Third race, gasoline cars, weight 1,432 lbs. to 2,204 lbs. or over; distance five miles. Prizes—\$100 first, \$50 second.

Fourth race, gasoline cars, 881 lbs. to 1,432 lbs.; distance, five miles. Prizes—\$100 first, \$50 second.

Fifth race, gasoline cars, 551 lbs. to 881 lbs.; distance, five miles. Prizes—\$75 first, \$40 second.

Truckmen Profit by Ferry War.

Another shift has been made by the ferry company relative to the transportation of automobiles between New York and Brooklyn. At first, after the law was enforced requiring the power of the motor cars to be shut off before boarding a ferryboat, it was permissible to shove the cars aboard. Then this was enjoined against, and motor cars were not carried at all, on the ground that shoving them aboard by hand delayed traffic. Now automobiles will be carried by the Brooklyn Ferry Company if they are towed aboard the boats by horses.

The truckmen crossing the ferries see a harvest in store.

Made a Practical Demonstration.

For the benefit of eight prospective purchasers a novel run was projected and carried out at Nappanee, Ind., recently. Eleven cars took part, driven by their representatives and occupied by the p. p. aforesaid. They were driven to Wawasee, where a trial of a hill described as the worst in Northern Indiana was made by the Ford, Knox and Auburn cars. Among the other cars in the run were the Oldsmobile, Cadillac, Rambler, Premier and Pierce.

Club Proposed for Salt Lake.

H. A. Cummings, of Salt Lake City, Utah, is the moving spirit in a plan to organize a club in that city. There are about fifty automobile owners in the place, and a call will be issued for a meeting to effect an organization.

Three Days Meet for California.

A two days' race meet will be held at Omaha, Neb., on August 23 and 24. An elaborate programme has been arranged, consisting of eight events on each day.

KNOX FOR PORTO RICO

Fourth Car to be Sent to the Island—Carries Fifteen Passengers, Mail and Baggage

An addition to the automobile stable of C. H. Martin has just been made by the Knox Automobile Co., who have shipped to Porto Rico a fourth Knox car to be used for transportation purposes on the island. The three cars which Martin took with him several months ago are now in successful use there. The latest vehicle is of the standard Knox

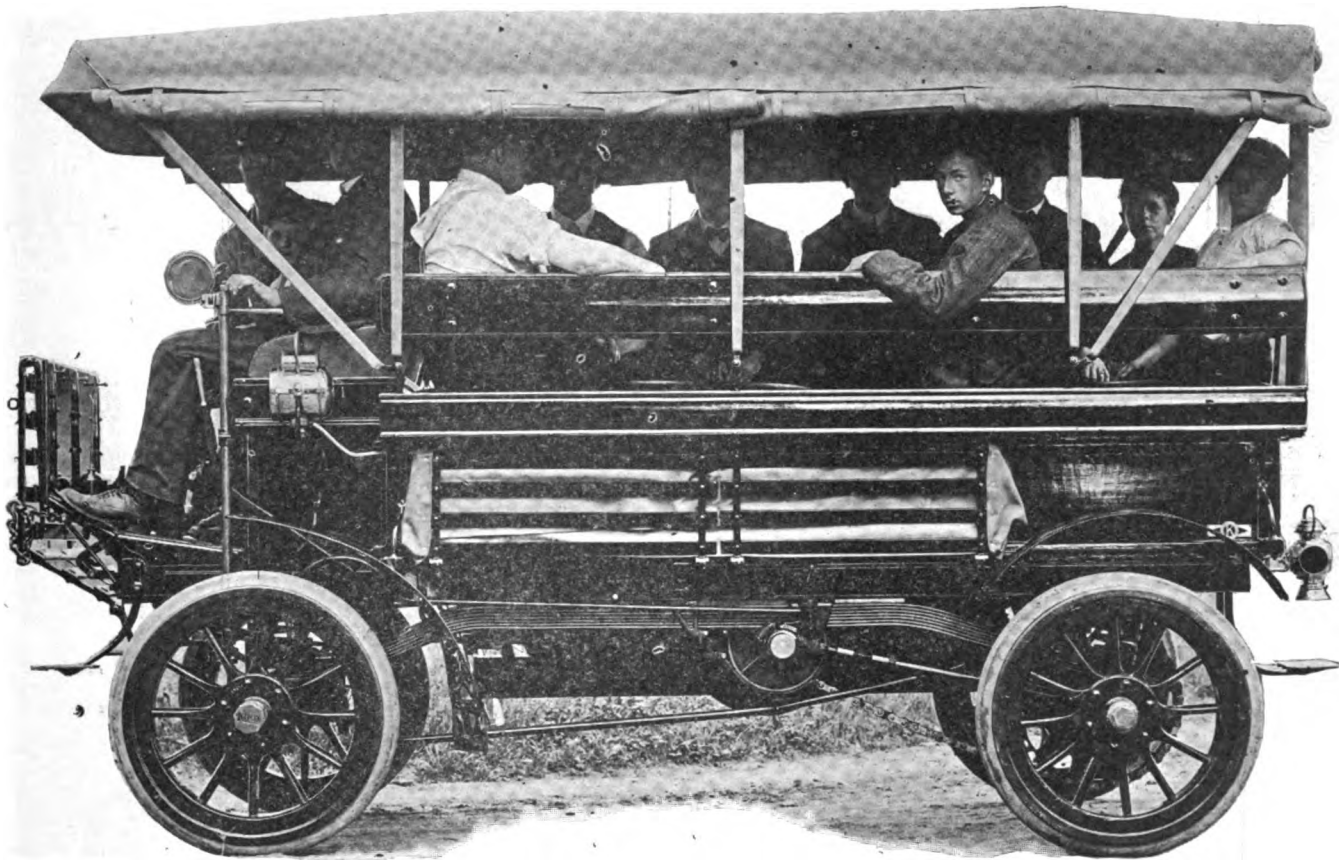
Schacht to Build Six Types.

Among the concerns which have recently turned their attention to the manufacture of automobiles, and is sufficiently encouraged to contemplate broadening its lines, is the Schacht Mfg. Co., of Cincinnati. Looking over the field, the Schacht people became convinced that there was a chance for an automobile which, by a close attention to details and the employment of the best materials and skilled labor, would proclaim its merits to every observer, and yet be retailed at a moderate price. Acting on this belief, the Schacht car was produced, and at once justified the step.

TRUCK'S BIG DAY'S WORK

Hauled 7,400 Pound Load Twenty-Five Miles in Five Hours—Horses Far Outdone.

How great has been the improvement in the art of building electric vehicles for commercial purposes is forcibly shown by the performance of a five ton Columbia truck recently delivered to the New York Edison Company by the Electric Vehicle Company. One day this week the truck left the company's shed at First avenue and Forty-first



THE LATEST KNOX BUS, TO BE USED IN PORTO RICO FOR PASSENGER AND MAIL SERVICE.

two cylinder type, and is designed to carry fifteen people, besides mail and baggage. The wheel base is 96 inches, with 56 inches tread. The wheels are fitted with 4-inch solid rubber tires. There are two folding side racks that let down for carrying baggage; also one that lets down in front for carrying mail. The weight complete, including racks and top, is 3,580 pounds. By leaving off the racks, this makes a first class patrol wagon.

The Pittsburg Transfer Co. has just placed orders for four of these cars for transferring passengers and baggage in Pittsburg, Pa.

Hereafter the Lucia Cycle Co., of Green Bay, Wis., will handle automobiles. Arrangements have been made to take the agency for the Crestmobile.

It is the intention of the Schacht Co. build six types of cars—a single seat, without top, \$950; single seat with top, \$1,000; two seats, open, \$1,000; two seat, with canopy top, \$1,075; delivery wagon, capacity 650 pounds, \$1,000, and a tonneau car, \$1,000.

These cars will be fitted with 12-horsepower, double approved, water cooled engine, giving ample power to drive them anywhere desirable.

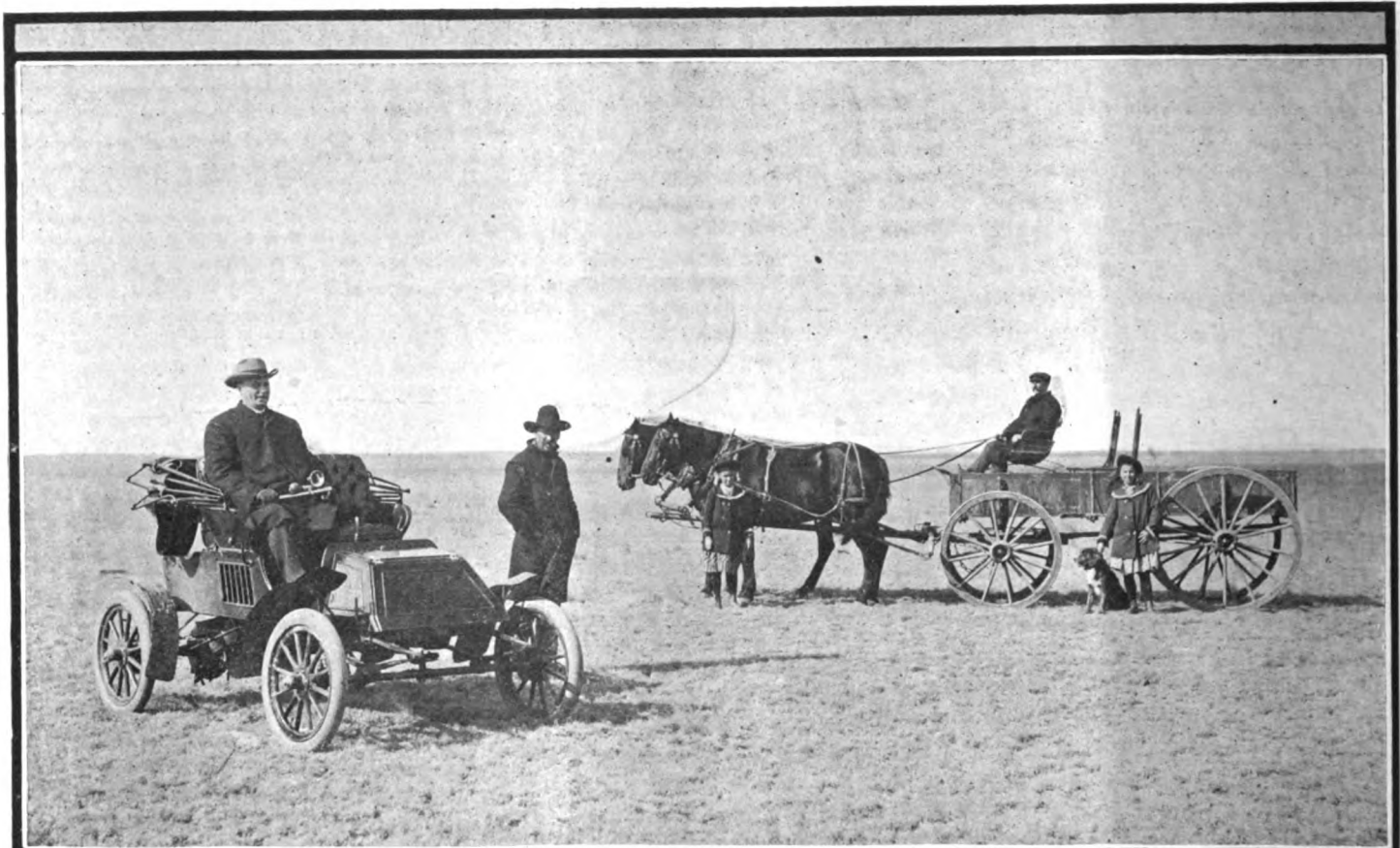
Elmore Rights Excepted From Sale.

The Fageol-Aldrich company, of Des Moines, Iowa, have sold their business to the Olds Gas Engine and Motor Company, with the exception of the rights to the Elmore automobile. The latter have been retained, and a new store will be opened for the sale of the Elmore line.

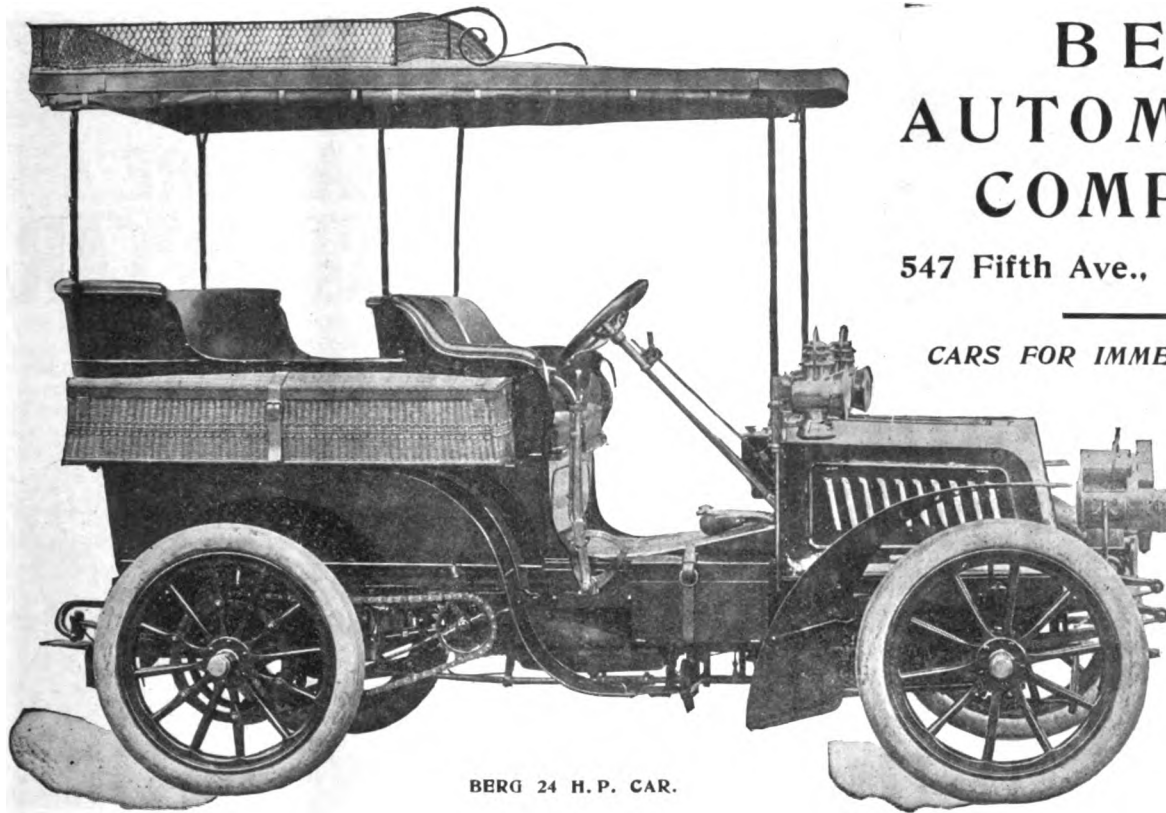
street, New York City, at 7:30 a. m., loaded with 25,000 burned out lamps, weighing 7,400 pounds, for the factory at Harrison, N. J., where it was loaded again with the same number and weight of new lamps. The truck then returned to the New York shed, reaching it at 12:30 o'clock, having made the round trip of twenty-five miles, including ferries and unloading and reloading, in five hours.

A test showed 64 amperes for 45 minutes still left. The electric truck previously in use required ten hours for the job. When horses were used only 16,000 lamps were carried, and the round trip lasted from 6 o'clock in the morning to between 9 and 10 in five hours, a notable performance, considering the vileness of the roads between Jersey City and Newark.

MARION KRAMER, OF CHICAGO, IN THE MODEL E RAMBLER WHICH MADE THE RUN TO OPEN THE OKLAHOMA RESERVATION.



IN OKLAHOMA TERRITORY. NATIVES HAVING THEIR PICTURES TAKEN IN MARION KRAMER'S RAMBLER CAR.



BERG 24 H. P. CAR.

BERG AUTOMOBILE COMPANY,

547 Fifth Ave., New York City.

CARS FOR IMMEDIATE DELIVERY.

SELLING AGENTS:

NEW YORK:
RAINIER COMPANY,
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THE DAN CANARY
AUTOMOBILE COMPANY,
521 Wabash Avenue.

DETROIT
W. A. RUSSELL & CO.,
248 Jefferson Avenue.

BINGHAMTON:
STIRLING MOTOR CAR
COMPANY,
184 Water St.

Members of the Association of Licensed Automobile Manufacturers.

VEEDER ODOMETERS

are supplied as part of the
regular equipment on the

*"It's Nice to Know
How Far you Go."*

THE VEEDER MFG. CO., - Hartford, Conn.

Makers of Cyclometers, Odometers, Techometers, Counters and Fine Castings.

**KNOX
STEVENS-DURYEA
PIERCE
OLDSMOBILE
APPERSON BROS
NATIONAL
BAKER
BUFFALO ELECTRIC
GLIDE**

THE TRIUMPH OF THE ELMORE PATHFINDER



OVER 1000 MILES OF ROADS OF ALL SORTS IN ALL KINDS OF WEATHER AND A REPAIR BILL OF 25 CENTS.

Did any car of any size ever equal this record? This car made a mapping and routing tour from New York to St. Louis during weather conditions that delayed traffic, and its business was to investigate every road, find the bad places. A severer road test could not be made.

The lesson to be learned from this trip is that a small car costing \$850 that can accomplish these things is worth further investigation. Let us send you our book, "One Long Jump and Two Short Steps," and our new catalogue.

THE ELMORE MFG. COMPANY,
1104 AMANDA ST., CLYDE, OHIO.

Members of the Association of Licensed Automobile Manufacturers.

AT THE SEASHORE A KNOX WATERLESS GASOLINE CAR

Is always *en regle*—style, luxuriousness and durability make it so.
Its beauty of proportions gives added charm to its reliability.—
Best by Road Test.
Has the Only High Power Engine Successfully Cooled by Air—
By the Knox Patent System of Automatic Air Cooling.
What others attempt to do the Knox does.
6 Styles Tonneaus, Surreys and Runabouts.
6 Styles Commercial Cars.
Send for Beautiful Catalogue.
KNOX AUTOMOBILE CO.,
Springfield, Mass.
Members Ass'n Licensed Automobile Manufacturers.

Selling Agencies in all Principal Cities.

"TUXEDO"
Two-Cylinder Touring Car.

Your
SPECIFICATIONS
for
FORGINGS

should reach us promptly to insure
Seasonable Deliveries.

**ARE YOU READY?
WE ARE.**

THE BILLINGS & SPENCER CO., Hartford, Conn., U. S. A.
Makers of
Drop Forgings of Every Description.

HEALTH FOR YOU

flows out of the rocks at the
various medicinal springs at

FRENCH LICK-WEST BADEN SPRINGS

in the highlands of Southern Indiana. This is the season of the year when a brief visit there will restore the normal balance of your system—renew appetite—put you in condition.

Outdoor and Indoor Recreations in plenty—Golf Playing Now
Superb Hotel Accommodations.



Hotel Rates range from \$8 to \$35 per week, including free use of all the waters.

Booklet telling all about the waters and giving list of Hotels and Boarding Houses, with their rates, sent free.

FRANK H. REED,
Gen. Pass. Agt., Chicago.

CHAS. H. ROCKWELL,
Traffic Man.

The Week's Patents.

766,815. Primary Battery. Thomas A. Edison, Llewellyn Park, N. J., assignor to Edison Manufacturing Company, Orange, N. J., a corporation of New Jersey. Filed November 18, 1903. Serial No. 181,591. (No model.)

Claim—1. A negative electrode for primary batteries employing a compressed mass of black oxide of copper in excessively finely divided condition, substantially as set forth.

766,830. Motor Vehicle. George Lane, Poughkeepsie, N. Y. Filed December 30, 1902. Serial No. 137,144. (No model.)

Claim—1. In a steam motor vehicle, a burner, a boiler, a flue for the products of combustion, a live steam jet in said flue, a steam motor and means for automatically decreasing the discharge from said steam jet as the steam pressure exhibited through the motor is increased.

766,910. Inflation Valve. James H. Spray, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut. Filed May 19, 1903. Serial No. 157,781. (No model.)

Claim—1. In a valve, a casing, a plunger carrier constructed as a tube adapted to be secured in said casing, an independent valve seat fitted in the end of said tube and engaging said casing and thereby held in place, a plunger comprising a valve and a stem mounted in said carrier, a spring arranged in said tube and surrounding said stem, a sleeve engaging said spring and loosely mounted upon said stem, and an enlargement on said stem engaging the sleeve to cause said

"THOUGHTFUL MECHANICS"

Positions are open for thoughtful mechanics who can improve details of RAMBLER Automobiles. Only practical men, willing to show their ability before remuneration is determined, are desired.

THOMAS B. JEFFERY & COMPANY,
KENOSHA, WIS.

Anticipating a large demand from NEW ENGLAND for

"THE CAR OF SATISFACTION"—

THE FORD

we early placed a large order.

RESULT:—We are in position to make deliveries and submit our proposition. If you are interested, write us.

P. A. WILLIAMS, Jr., 147 Columbus Ave., Boston, Mass.

TIRE CASES AND LAMP COVERS.

Tire Covers, Dust Guards, Engine Boots, Loggins, etc.

Best goods, lowest prices.

Write for samples and quotations.

THE WM. H. WILEY & SON CO.,
Box 78. HARTFORD, CONN.

CRESTMOBILE

\$800 for two persons, and \$900 for four persons.

The standard low priced air-cooled car.

THE CREST MFG. COMPANY,
Cambridge, Mass., U. S. A.

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.

In capitals, 25 cents per line.

SEND five cents for our illustrated catalogue of second-hand automobiles. Big variety, low figures. MISSISSIPPI VALLEY AUTOMOBILE CO., 3927-3939 Olive St., St. Louis, Mo.

FOR SALE—Factory 50 x 80, two stories with power, machinery and tools; all lit with electricity; good fire protection; lot 56 x 150; suitable for fine automobile or carriage plant; in fine town of 1,600; two railroads and one electric road; will sell for \$2,500; a snap for some one; owner going south for health. Address, Box 7, Oxford, Mich.

FOR SALE—1903 Merkel Motor Bicycle completely overhauled and now really better than new. N. Y. B., care MOTOR WORLD.

FOR SALE—As good as new Waverly Electric Automobile. DR. E. M. OUTLAND, 547 Newton Claypool Bld., Indianapolis, Ind.

FOR SALE—1904 Model Haynes-Apperson Two Passenger Light Touring Car with Top and Tonneau. Cost \$1,500, will sell for \$1,000. Car was received from the factory on June 20th and has been used but very little and in the very best of condition. The reason for selling is that the owner desires to purchase a 24 H. P. machine. This is a bargain. Address, L. L. CRAWFORD, Broadway, Uniontown, Pa.

PACKARD, Model F, extra tires and parts, in good condition. Correspondence solicited. E. E. DAVIS, Northampton, Mass.

FOR SALE—1904 White Touring Car, has been run less than 100 miles. Can be seen at 364 Franklin St., Melrose Hlds., Mass., at any time. Has canopy top, side curtains, oil side lights and gas head lights. Costs as it stands \$2,250. Painted blue and is in perfect condition.

SEND stamp to C. A. Coey & Co., 53rd and Cottage Grove, Chicago, for the largest list of second-hand machines ever issued.

SELL Motorcycles \$55.00 up. Orient Buck boards \$25.00 up. Touring cars \$650 up. Also Bicycles, Talking Machines and Records. Old machines bought. Catalogues 2 cents. KNIGHT CYCLE CO., St. Louis, Mo.

ADDITIONAL capital wanted to manufacture a well known automobile. Address Licensed Manufacturers, care MOTOR WORLD.

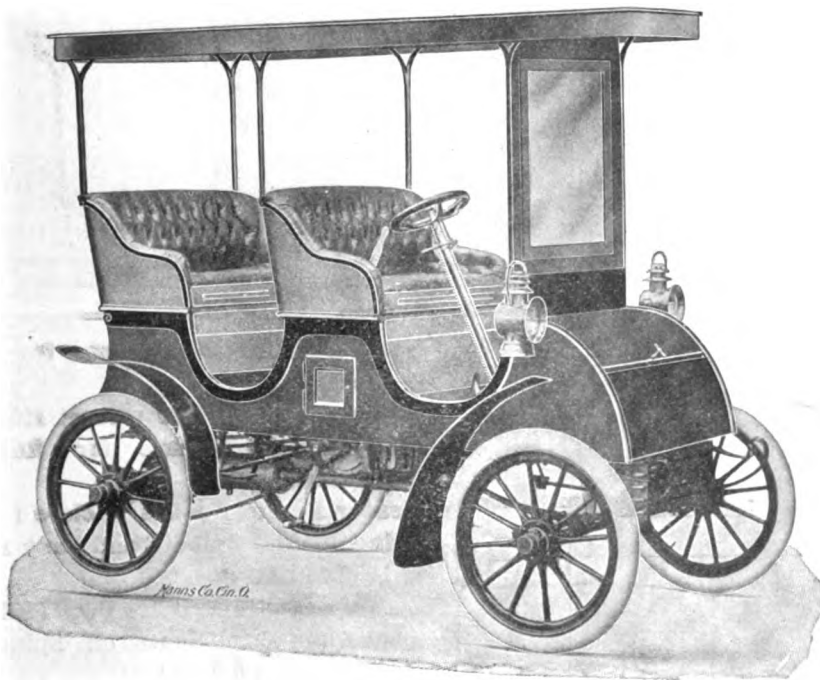
FOR SALE—Gasoline touring car; seats five; extra large baskets; five lamps, exterior horn extra tires, tire case, etc. Splendid condition; used but three months; will entertain any reasonable proposition, as I am purchasing a larger car. Address O., care MOTOR WORLD.

AUTOMOBILE owners—Send your check for \$2 and get a solid brass initial for your automobile; be up to date; all the rage; adds 50 percent to looks; order to day; state initial wanted. GEO. E. MANSFIELD, Box 89, Rockland, Mass.

AUTOMOBILES—Two new Rambler runabouts, artillery wheels, 3-in. tires, new lamps, horns, etc. \$475. EASTERN AUTO EXCHANGE, Salem, Mass.

FOR SALE—1904 Haynes Apperson Tonneau complete with canopy top, in perfect condition, run less than 1000 miles. Reason for selling, owner wants lighter car. Address LISK & PETRY, Hudson, N. Y.

THE CAR OF SIMPLICITY AND POWER—
The SCHACHT



Two-seated Surrey or Tonneau style with top \$1075. Glass front \$25 extra. 12 horsepower, opposed cylinder engine.

The simplest, strongest and best machine on the market for the money. Write us for catalogue, and we will give you full specifications.

THE SCHACHT MFG. CO., Cincinnati, O. U. S. A.

spring normally to draw the valve to its seat.

766,926. Vehicle Wheel. Carroll N. Beal, San Francisco, Cal. Filed January 28, 1904. Serial No. 191,028. (No model.)

Claim—1. A vehicle wheel, consisting of a nave, an annular pneumatic cushion disposed around said nave, a series of saddle pieces

mounted on said cushion, radial spokes mounted on said saddle pieces, felly members borne on the outer ends of said spokes, an elastic tire sustained by said felly members, and means for preventing said tire from stretching, substantially as specified.

767,152. Automobile. Edwin J. Jenness,

Chicago, Ill. Filed March 22, 1901. Serial No. 52,330. (No model.)

Claim—1. In a vehicle, the combination with a vertically oscillating axle, of a trailing frame journaled thereto, and a wheel journaled upon said frame, substantially as described.



Every Dog Has His Day!

THIS IS THE TIME TO

BUY YOUR SUPPLIES.

**Lamps, Horns, Pumps, Goggles, Plugs,
Batteries, Odometers, Jacks, Coils,
Baskets, Tires, Chains, etc.**

EVERYTHING FOR AUTOMOBILE OWNERS AND DEALERS.

EXCELSIOR SUPPLY CO., - 233-5-7 Randolph Street, Chicago, Ill.

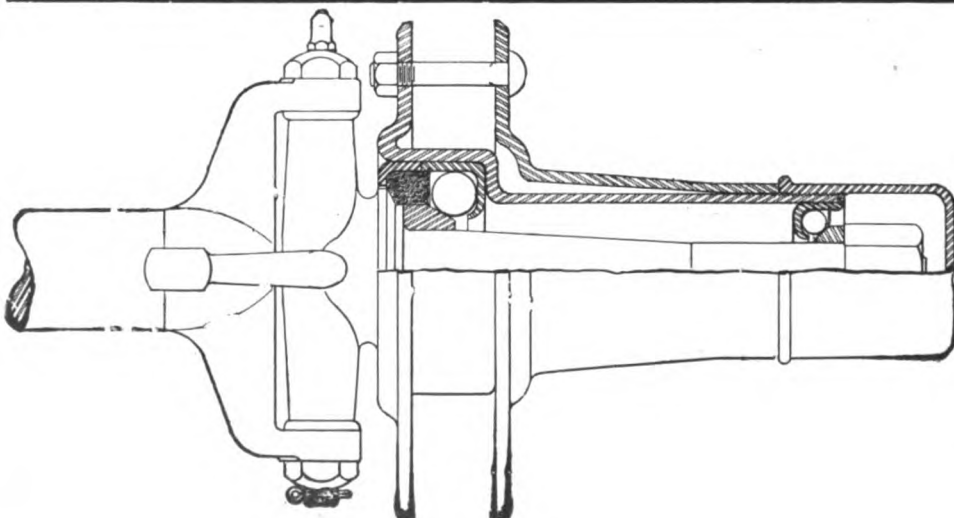
SOLVES THE IGNITION PROBLEM.

THE **Bullock** IGNITION SYSTEM DOES AWAY WITH ALL INDUCTION AND SPARK COILS, SOOT AND HIGH VOLTAGE TROUBLES.

THE **Bullock** "SPECIAL" CAN BE OPERATED WITH ANY SIZE ORDINARY DRY BATTERIES—6 BEING AMPLY SUFFICIENT—AND EFFECTS GREAT ECONOMY IN CURRENT CONSUMPTION.

WRITE FOR BULLETIN—W.

THE BULLOCK-BERESFORD M'FG. CO., CLEVELAND, O.



THESE HUBS are drawn from Sheet Steel.

Extremely light and strong Hubs with a smooth surface for finish are obtained.

Center line of Spokes is close to Steering Head. Smooth and Easy Steering is obtained.

Races are GROUND IN POSITION.

Cones and Cone Seats on Spindles are GROUND TO GAUGE.

We manufacture for the trade only.

THE AMERICAN BALL-BEARING CO.
CLEVELAND, OHIO U. S. A.



DEPENDABLENESS.

The Morgan & Wright Clincher has that quality of dependableness one finds in a good honest man.

IT'S PUT THERE IN THE MAKING OF THE TIRE.



MORGAN & WRIGHT, CHICAGO

New York

Dayton

Detroit

St. Louis

San Francisco

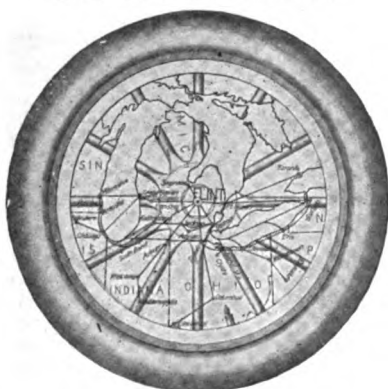
Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours.
CHICAGO 24 hours.



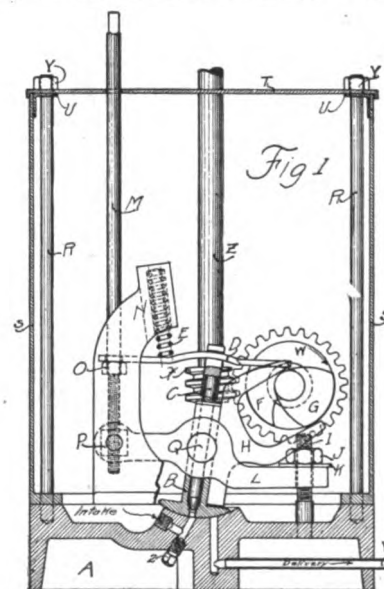
Baltimore 5 days.
New York 4 days.
BOSTON 5 days.

We are supplying the largest Manufacturers—WHY?

THEY GET THE WHEELS.

IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.

THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.

GRAY AND DAVIS

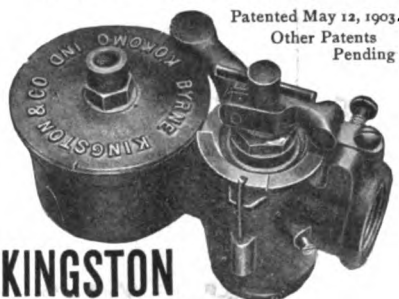
"Makers of Smart Automobile Lamps."

Be Sure YOUR CAR is Equipped With Them.

AMESBURY, MASS.

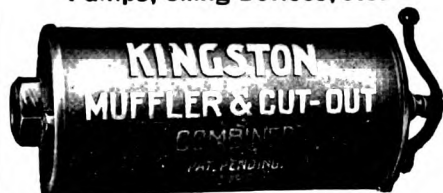
Kingston Carburetor.

OVER 1900 IN USE.



KINGSTON

Carburetors, Mufflers, Spark-Coils,
Spark-Plugs, Steering Wheels,
Pumps, Oiling Devices, etc.



BYRNE, KINGSTON & CO., Kokomo, Ind., U. S. A.

Pat. Jan. 20, 1901.



TRADE **CRADOMETER** MARK.

An instrument that will enable you to determine the
grade per cent. you are ascending, or descending.

Sent postpaid on receipt of price, \$1.50.

THE ADAMS COMPANY, Dubuque, Iowa



The FORG GASOLENE BURNER.

Best and Most Effective Burner Manufactured.

PETER FORG, Somerville, Mass.

CHAS. E. MILLER, Agent, New York.



STA-RITE
"STAYS RIGHT THE LONGEST."

Is the most satisfactory ignition plug in the world at any price. More sold than all other advertised American made plugs combined. 18 sizes, Olds Ford, Rambler, Northern, Queen, Peerless, Packard, Orient, Panhard etc., \$1.50 Winton-Autocar, Thomas, Locomobile, Knox etc., \$1.75 Mica plugs \$2.00- Cadillac size plug \$3.00. New No. 17 size \$5.00. Best porcelain obtainable used. Get a set right away. Send for complete catalogue and discounts. Dynamos, Coils, Meters, etc.

THE R. E. HARDY CO., } 156 Jefferson Ave.
Formerly, DETROIT MOTOR WORKS, INC., 1900. } Detroit, Mich.
P. J. DASEY, 435 Wabash Ave., Chicago



You Will Not Miss it by Adopting Our Bevel Gear Drive Rear Axle or Our Transmisson Gear.

ASK US ABOUT THEM.

THE CASE MANUFACTURING CO., Columbus, Ohio.

We Also Do Special Machine Work.

We are in the MARKET to make

Sample Automobile Bodies and Wheels For 1905.

also

TO FIGURE ON CONTRACTS, LARGE OR SMALL.

Quality and Workmanship of the Highest Standard Only.

PROMPT DELIVERIES GUARANTEED.

THE BIDDLE & SMART COMPANY. Amesbury, Mass., U. S. A.

STANDARD AUTOMOBILE PARTS

Pressed steel frames, pressed steel hubs, malleable hubs, brakes, steering gear, chains, transmission gears, engine cranks, mufflers, front axles (tubular and forged), rear axles, (chain and bevel gear drive), electric truck parts.

FEDERAL MANUFACTURING COMPANY, ELYRIA, OHIO.

Selling Agent—Hayden Eames, American Trust Building, Cleveland

THE MITCHELL

The Car You Ought to Have at the Price You Ought to Pay.

Bristling With Original and Exclusive Features.

Are you posted regarding them?

MITCHELL MOTOR CAR CO.,

9 Packard Ave., Racine, Wis.

THE DUERR-WARD CO., No. 1787 Broadway, New York Distributors.

ARTHUR G. BENNETT, No. 20 Lake St., Chicago Distributor.



NOT AN EXPERIMENT.

Why use a tire that causes you trouble, when one can be obtained that has passed the experimental stage and has given universal satisfaction to all users.

All roads are alike when a machine is fitted with Tennant Tires.

Send for catalog that tells all about it.

TENNANT AUTO TIRE CO.,
144 West Main Street, Springfield, Ohio.
NEW YORK OFFICE: 1900 Broadway, cor 63rd St.
CHICAGO OFFICE: 1461 Michigan Avenue.

FRAME HELP.

We help you on your frames because we can give you good frames, made of pressed steel—they're what you want.

Our blue prints are sent on request

THE PARISH & BINGHAM CO.,
Cleveland.

Auto Run Stopped Bank Run.

A run on a bank was checked at Lancaster, Pa., recently by a run in an automobile and the bank saved from ruin. While the run was on the president of the bank went to Columbus, Ohio, to get some necessary money from the State bank there. He missed his return train. If the money he had obtained, \$40,000 in gold, was not on hand in time the bank would be forced to close its doors. In this dilemma a fast automobile was obtained and the trip to the bank made in time to save the day. Upon learning what had been done the depositors stopped clamoring for their money.

Illinois Motorists Organize and Protest.

Called into being primarily to put into practical effect a protest against an obnoxious park ordinance, the Springfield Automobile Club has been organized by motorists of Springfield, Ill. These officers were elected: President, Burke Vancil; vice-president, Henry Herrian; secretary, R. B. Seymour, and treasurer, Ralph Baker.

The ordinance referred to is one passed by the Park Board restricting the use of Washington Park by automobiles to the hours after 6 p. m. The club has appointed a committee to protest against it.

"Justice" Carman Applauds Shooting.

All the anarchists were not hanged in Chicago, nor are all the rest of them occupying judges' benches in New York City. Justice of the Peace Arlington C. Carman, of Patchogue, says that the shots fired by Deputy Sheriff Wicks, of his office, at an automobile have not been in vain, for motor cars now run very slowly through the village. Maybe if Wicks had killed the automobilist the village would be entirely avoided by motor car users.

FOR SALE.

Columbia 12-H. P. 2 cylinder car with tonneau body. Seating capacity five. Painted rich dark green. Complete with head lights, side lights, horn, boots, baskets and accessory parts. Reason for selling owner wishes higher powered car. Price \$750.00 F. O. B. Hartford, Conn. Cost \$1500.00. Address

P. O. BOX 1122, HARTFORD, CONN.

Better Not. .

have any ignition outfit than to have a poor one.

WE MANUFACTURE NOTHING BUT THE BEST.

WRITE FOR CATALOGUE

AMERICAN COIL COMPANY

West Somerville, Mass.

AUTO SUPPLY CO.,

Broadway, corner 50th St. New York Agents.



WHITLOCK COOLERS

For 1905.



The success of the WHITLOCK COOLER has been so completely demonstrated and this device is now so widely used and so well known that a description of it here would be superfluous.

We wish to state, however, that our 1905 cooler will be as far ahead of our 1904 product as that was ahead of those we built in 1903. We are not content to "let well enough alone." The fact that the WHITLOCK COOLER is the best, almost the only, device in its class on the market to-day, has not prevented us from making every effort to improve every detail.

No radical changes from the already popular and successful type have been attempted, but we have confined our efforts to perfecting minor details of construction, to a careful study of the features which promote high efficiency and great durability in operation, to the improvement of processes of manufacture, and to the increasing of our facilities.

We are now receiving orders for early fall delivery.

THE WHITLOCK COIL PIPE COMPANY

HARTFORD, - CONNECTICUT

Protection for Man and His Motor

RAIN APRONS, ENGINE CASE,
CHAIN BOOT

Also Rubber Mats, Hampers, Lamps,
Horns, Clothing, and everything else
required by Automobilists

Send for Catalog

AUTOMOBILE EQUIPMENT COMPANY
251 Jefferson Street, Detroit, Mich.

Autolyte Lamps, Imported Horns.

A. H. FUNKE,
83 Chambers St., N. Y.

Peerless Motor Cars.

THE PEERLESS MOTOR CAR CO.,
Cleveland, Ohio.

QUINBY AUTOMOBILE-BODY DEPARTMENT

EMERSON BROOKS, Manager.
1534 Broadway, cor. of 45th St., New York.
Telephone, 6536-38th St.

TOURING CAR

THE F. B. STEARNS CO.,
CLEVELAND, OHIO, U. S. A.

Big Four Route

TO

St. Louis

"The Way of the World"

to the

World's Fair

For information as to rates, hotels
and boarding houses, address
nearest Big Four Agent, or

WARREN J. LYNCH,

G. P. and T. Agent,

Cincinnati, O.

NELSON STEAM WATER PUMPS, KEROSENE BURNERS,

Fittings and Equipment for Steam Vehicles.

JOHN SIMMONS CO.,
110 Centre St., New York.

HOMES IN THE SOUTH.

There are in the Southern States awaiting development
thousands of acres of uncultivated farm lands in tracts of all
sizes, which can be purchased very cheaply. They are pro-
ductive, healthy, and close to good markets. In ten States
reached by the lines of the

SOUTHERN RAILWAY.
For information about opportunities now available, prices of
and, character of soils, etc., write to
M. V. RICHARDS, Land and Industrial Agents,
WASHINGTON, D. C., Southern Railway.



The Baldwin Chain Company

— MAKE —

Automobile Chains,
Sprockets, Spur and Bevel
Gears.

Baldwin Chain & Mfg. Co.,
Worcester, Mass., U. S. A.

DIXON'S GRAPHITOLEO

(Pure Flake Graphite and Vaseline.)

The most efficient all-around lubricant
for automobile bearings.

Write for Auto Booklet 83-H and samples.

JOSEPH DIXON CRUCIBLE CO.,
Jersey City, N. J.

New York City Salesrooms, 68 Reade St.

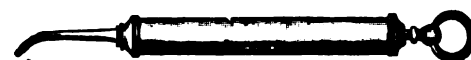
AUTO LEATHER

Our leathers are used by most
of the largest automobile manu-
facturers of this country.

Ask us why.

AMERICAN OAK LEATHER COMPANY,

Cincinnati, Chicago, St. Louis, Boston.



MILLER OIL GUN.

This oil gun or syringe should be part of the equipment of
every automobile. It will handle light and heavy oils and is
intended for oiling transmissions, gear boxes and inaccessible
places. By its use 50 per cent of the oil now wasted can be
saved. Furnished in polished brass. Diameter of barrel 1 in.
Total length 13 1/4 in. Guaranteed.

Price, \$1.00 each; \$10.00 per dozen.

SPECIAL PRICES TO MANUFACTURERS AND JOBBERS

Catalog mailed upon request.

The Largest Automobile Supply House in America.

CHARLES E. MILLER,
97-99-101 READE ST., NEW YORK CITY
Retail Branch: 38th St. and Broadway.



Springfield Top

PATENTS PENDING.

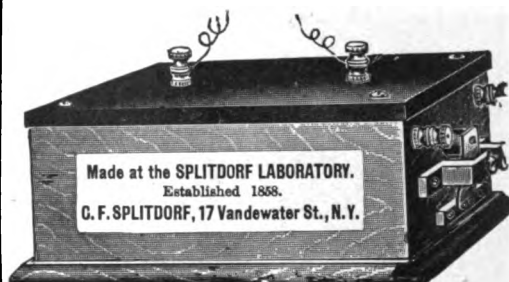
Aluminum Bodies
Aluminum Fenders
Aluminum Hoods.

**Springfield Metal
Body Co.,**
Springfield, Mass.

RADIATORS,

TANKS,
MUFFLERS,
FENDERS,
HOODS.

BRISCOE MFG. CO., - Detroit.



HIGH-GRADE LAMPS

Acetylene Gas and Oil

ATWOOD MFG. CO.,
Amesbury, Mass.



"Jack, what is C H & D, a new breakfast food?"

"No, it's a Railroad from Cincinnati to Chicago." Speaking of food,
I got the best meal on their cars I ever had on a railroad."

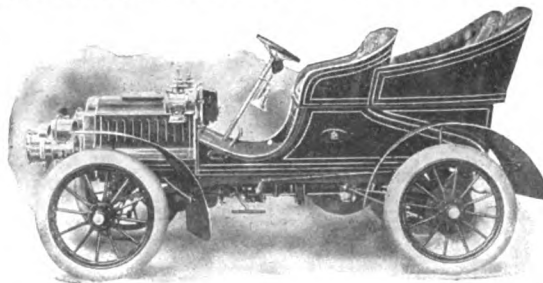
Another American Invasion



Oldsmobile

The progress of the Oldsmobile abroad has been a continual triumph. It has led the advance of automobiles into remote corners of the earth. Everywhere it is recognized as the world's standard runabout—the *best thing on wheels*.

**Oldsmobile
Standard Runabout
Price \$650**



**Oldsmobile
Light Tonneau Car
Price \$950**

The Oldsmobile Curved Front Runabout is the most thoroughly tested automobile in the world. Built upon the solid foundation of Oldsmobile experience the Oldsmobile Light Tonneau Car possesses style, quality and efficiency to an unequalled degree. It is in no sense an experiment. It is built to run and does it. It has plenty of speed and no end of endurance. It is built without gaskets. Cylinder and cylinder-heads are cast integral. Main bearings are self-oiling. The hub-brakes are controlled by foot-lever. There are numerous other distinct features.

Our immense factory facilities—nearly one million square feet of floor space—insures prompt delivery.

OLDS MOTOR WORKS, 1332 Jefferson Avenue, Detroit, U. S. A.

Member of the Association of Licensed Automobile Manufacturers.



Pope Hartford

The Wonderful Record

of this model in the great
run from

NEW YORK to ST. LOUIS

places it at the very forefront of up-to-date,
moderate-priced gasoline touring cars.

SCIENTIFICALLY TESTED. GREAT RESERVE POWER.
RELIABLE IN EVERY PARTICULAR.



Immediate Deliveries.

10 H. P. - - -	Price, \$1,200
Without Tonneau - -	" 1,050

POPE MANUFACTURING CO., Hartford, Conn.

BRANCHES:

New York—12 Warren St.	Washington, D.C.—819 14th St., N.W.	Philadelphia, Pa.—909 Arch St.
Boston—221 Columbus Ave.	Providence, R. I.—15 Snow St.	San Francisco, Cal.—451 Mission St.
Chicago, Ill.—497 Wells St.	<i>Members Association Licensed Automobile Manufacturers.</i>	

IS THIS NOT ENOUGH TO CONVINCE YOU?

At Nappanee, Ind., there was an opportunity to sell a couple of automobiles. Dealers from all principal agencies were after the business. A contest became necessary to secure the sales. The following, which is taken from the *South Bend Tribune* of July 23rd explains, without giving the names of our competitors, the result of the contest:

"A. Chaney, Manager for W. H. Barger, entered a contest at Nappanee, Ind., last Thursday with a Model B CADILLAC against a two cylinder —, a four cylinder —, an — and a —. The contest was for hill climbing, in which the CADILLAC won. A race of 11 miles was run by Mr. Chaney with the CADILLAC against Earl Fisher of Indianapolis with the four cylinder—. The CADILLAC won in two minutes. In the hill climb one of the — machines went wrong, the — broke a driving sprocket, the — engine went wrong and the — broke the low speed clutch. Mr. Chaney made the entire trip without using a wrench or a screw driver and brought home orders for two Model B CADILLACS, one of which was delivered Friday by Mr. Barger to Harvey Coppes, and on Saturday Mr. Chaney delivered the other to Fred Freese and brought back two other orders, one for John Coppes and one for H. E. Rosebrook. These two cars will be delivered the first of next week."

W. H. Barger took a party Thursday afternoon on a run to Cassopolis, Dowagiac and Niles, Michigan. The trip was made via Edwardsburg to Cassopolis in one hour and thirty-five minutes.—*South Bend Tribune*, July 23rd.

The CADILLAC has demonstrated so often its many superior qualities that it seems almost folly for us to call attention to them. In the hands of an operator who knows a CADILLAC, a stock machine has and will prove its superiority over any other machine at anywhere near the same price. Deliveries can be made promptly.

CADILLAC AUTOMOBILE COMPANY,

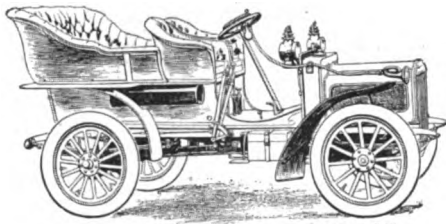
Members of the Association of Licensed Automobile Manufacturers.

DETROIT, MICH.

Re The St. Louis Tour.

Nine Incomparable White Steam Touring cars started and nine arrived at St. Louis as per schedule. Four from New York; one from Boston; two from Cleveland and two from New Orleans.

If you start in a White, nine times out of nine you will arrive at your destination on time.



1905 model White Steam Touring Car.

"The best collective performance, however, was that of the brigade of five White steamers, which, keeping well together throughout, glided over the uneven surface as if they had been skimming over asphalt."—*N. Y. Herald.*

WHITE SEWING MACHINE COMPANY, CLEVELAND, OHIO.

Unique and Unparalleled Performance of the Pathfinder

ELMORE



The history of automobiling in America records no more sensational performance than that of the Pathfinder Elmore on the recent trip from New York to St. Louis and return. An ordinary stock car was selected to map out the roads in advance of the endurance run. This tremendous trip of more than 5000 miles over villainous roads was made by the Pathfinder Elmore with a repair bill of only 25 cents, and not a single displacement. Did any car in the endurance run—whether it cost \$1000 or \$10000—equal this astonishing record of the \$850 Elmore? Send for catalogue and the intensely interesting little book "One Long Jump and Two Short Steps."

THE ELMORE MFG. COMPANY,
1104 AMANDA ST., CLYDE, OHIO.

Members of the Association of Licensed Automobile Manufacturers.

TAKE A KNOX WATERLESS CAR TO THE MOUNTAINS

and climb right up without let or hindrance. Knox does the trick. No overheating of engine—no water troubles—no worry—simply luxury in mountain touring.

BEST BY ROAD TEST.

Get Catalogue.

6 Styles Passenger.

6 Styles Commercial Cars.

Knox Automobile Co.,
Springfield, Mass.

Members Ass'n Licensed
Automobile Manufacturers.

Selling Agencies in
all Principal Cities.



Hand Book

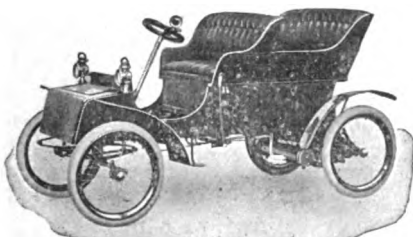
of Gasoline Automobiles issued for the information of the Public who are interested in their Manufacture; Sale and Use.

This handsomely bound and artistically printed book now in the hands of the printers will contain about 88 pages and will illustrate about 80 gasoline cars; one car and its specifications to each page. It is issued primarily for convenience and information to the prospective purchaser of an automobile. The products of the principal manufacturers throughout the United States of America and the Importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto in red ink. The questions being uniform, the ease of comparison is obvious and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste, or the means at his command.

Sent upon receipt of 6 cents in stamps for postage.

ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS,

Room 1009—No. 7 East 42nd Street, New York.



Tonneau Car, price \$525.

IF YOU KNEW



Runabout, price \$475.

how useful one of these little machines would be to you, and how much pleasure can be derived from them, your order and check would be on the way to us before another sun has set. The following is what one purchaser says; we have received hundreds of similar letters:

WALTHAM MFG. CO., Waltham, Mass.

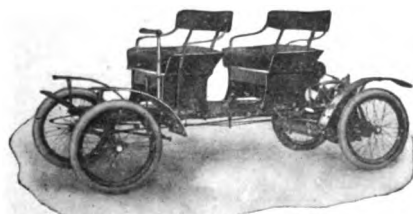
Gentlemen: I do not wish to take up your valuable time, but I do wish to let you know what I think of the Orient Surrey I purchased of you some four weeks ago. I went to Chicago a week ago and carried four persons, and it is a good distance of over one hundred miles. I made the trip, in and out, in extra good time, and did not have one bit of trouble either way. It is the easiest riding machine that I ever rode in, and as for power will say that I think it has more than you claim for it, as it will climb any kind of a hill, and it is very seldom that I have to use the slow-speed gear. I would have written you some time ago, but I wished to give it a thorough trial, and now I have done so on hill, in sand, and in mud, and am pleased to say that I have never found it wanting in any particular.

Wishing you success, I am,

Yours respectfully,

N. H. RANDALL.

Write for catalogue.



Surrey, price \$450.

WALTHAM MFG. CO.,

WALTHAM, MASS.



Buckboard, price \$425.



DEPENDABLENESS.

The Morgan & Wright Clincher has that quality of dependableness one finds in a good honest man.

IT'S PUT THERE IN THE MAKING OF THE TIRE.



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

MORGAN & WRIGHT, CHICAGO

New York

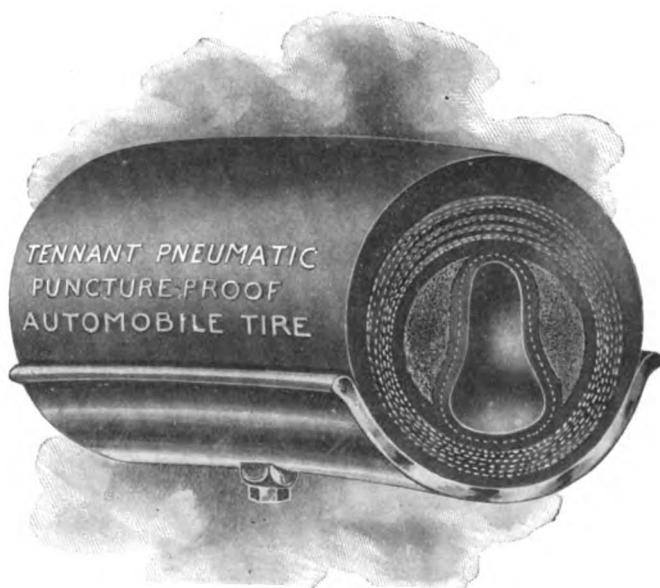
Dayton

Detroit

St. Louis

San Francisco

HONOR WELL PLACED.



THE STRENGTH OF THE TENNANT TIRE AS A WHOLE IS IN THE HARMONY OF THE PARTS.

They have an excellence that is all their own and insure a season of tire satisfaction. The only puncture-proof tire that has proved worthy of the title.

No pinching of the inner tube. Rim cutting impossible. Absolutely perfect in every detail.

If such a tire appeals to you, a letter will bring Catalogue and full information.

TENNANT AUTO. TIRE COMPANY,

144 West Main Street, Springfield Ohio.

NEW YORK OFFICE, 1900 Broadway, Corner 63rd Street.

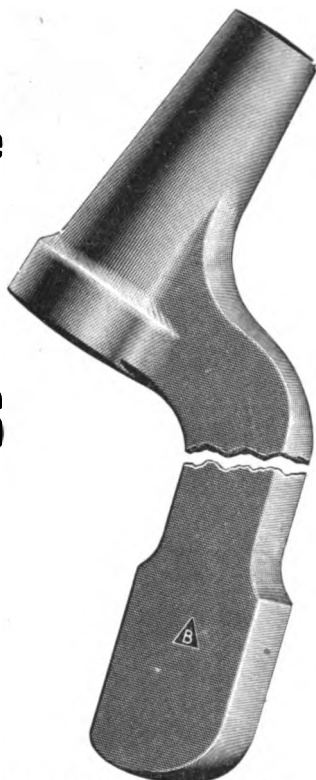
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the Time**

to submit your

**SPECIFICATIONS
for
FORGINGS**

to insure
prompt deliveries.

**We are ready.
Don't delay.**



THE BILLINGS & SPENCER COMPANY, Hartford, Conn.
Makers of
Drop Forgings of every Description.

IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours.
CHICAGO 24 hours.



Baltimore 8 days.
New York 4 days.
BOSTON 8 days.

*We are supplying the largest
Manufacturers—WHY?*

THEY GET THE WHEELS.

IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.



TALKING RIMS

is a difficult subject.



MAKING RIMS

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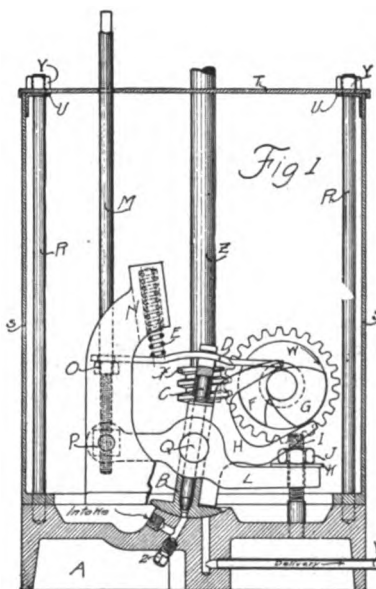
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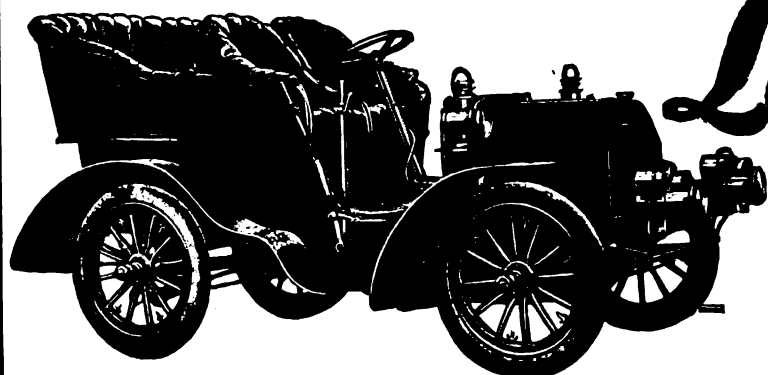


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HILL PRECISION OILER**



Measures the oil for the bearings, and always sends it there.

THE STEEL BALL COMPANY,
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Type C. \$2100 complete.

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STATIONS, AND ONE BLOCK
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is the season of the year when a brief visit
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week, including free use of
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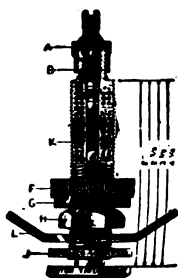
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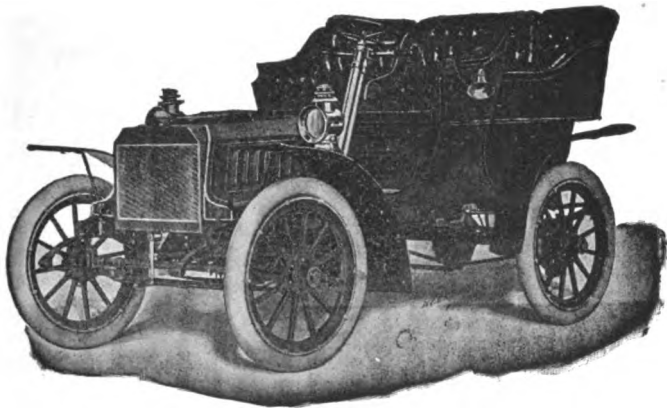
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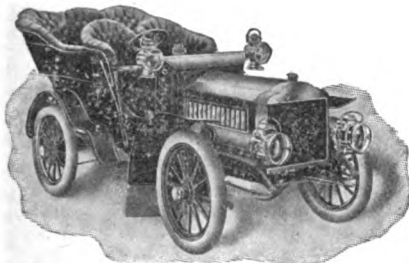
Automatic oiling of engine and other parts.
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BOOKLET.

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NO CAR HAS BETTER REPUTATION.



The 1905 "FLYER" will shortly be announced.

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The Best Automobile Motors

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Automobile Charging Machines

ARE MADE BY

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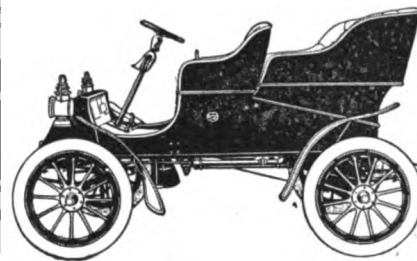
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is an automobile with a reputation. We have proven our ability to make and sell for \$900 a car equal to any machine costing less than \$2,000.

What is more, THE FORD has stood the test of time and hard usage. The double opposed motor is the same type of engine used in the most expensive touring cars.

FOR THE PHYSICIAN and Business Man the reliability of the FORD is its strongest recommendation.

Its simple construction enables any member of the family to easily master the mechanism and to readily learn to operate it.

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"The A.B.C. of Electricity"

will help you understand many things about motors which may now seem hard of understanding.

108 Pages.

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THE GOODMAN COMPANY,
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Extract from the MOTOR AGE of June 11th, 1904:

"Of the smaller machines, the RAMBLER was easily king, and, to the surprise of every one, the RAMBLER which won in this class made better time than any of the second class machines, and beat the Peerless, Packard and Stearns in the first class."

This was a stock

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the kind we sell for \$1200. You may pay more money for a car, but you cannot buy better service or a more reliable automobile. Our catalogue "W" fully describes all models, and our booklet "A Little History" gives a graphic account of another memorable performance of the RAMBLER, when it distinguished itself in a like manner. Both are sent free on request.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York, U. S. A., Thursday, August 25, 1904.

No. 22

OLDS'S NEW ASSOCIATES APPEAR

Plans and Composition of his Million Dollar Company Disclosed—Officers Chosen.

The organization of the million dollar company at Lansing, Mich., with R. E. Olds at the head, of which the Motor World last week gave the exclusive news, has been formally completed by the election of these officers:

President and general manager, R. E. Olds.
Vice-president, Reuben Shettler.

Secretary and treasurer, Edward F. Peer.

These constitute the board of directors. Other stockholders in the company are Hugh Lyons, Mayor of Lansing; Elgin Mifflin, Charles P. Downey, James J. Baird, B. F. Davis, E. S. Porter, Lawrence Price, J. Edward Roe and W. H. Porter, all of Lansing.

Articles of association as the R. E. Olds Co. were filed on the 17th. None of the capital stock of \$1,000,000 is for sale, "every dollar of it having been subscribed within three hours after Mr. Olds consented to head the enterprise." Mr. Shettler, a wealthy retired merchant of Lansing, with a winter home in Los Angeles, and a warm personal friend of Mr. Olds, was the prime mover in the formation of the company, and was chiefly responsible for inducing him to re-enter the field of automobile manufacture.

A temporary plant in Lansing already has been leased, and plans drawn for an immense factory, that will accommodate between 900 and 1,000 workmen. It is expected that work on it will be well under way within thirty days, and that it will be producing cars soon after January 1.

The company will entitle its car the "Reo," a name made up, as is apparent, of the initials of its president.

When Mr. Olds retired from the general management of the Olds Motor Works on January 1 last, it is stated that he had no intention of again engaging in automobile manufacture, and as recently as five weeks ago he is reported to have refused an offer of New York capitalists who sought to induce him to organize a company, and who tendered him the presidency and a controlling interest. He, however, finally yielded to the pressure of his old friend Shettler, and the R. E. Olds Co. was the almost immediate result.

Referee Upholds the Creditors.

Referee Frank L. Wean on Thursday last submitted to Judge Kohlsaat his decision in the bankruptcy proceedings brought against the Chicago Motor Vehicle Company. The referee holds that the concern was insolvent at the time of the filing of the original petition by creditors on October 12, 1903.

The liabilities proved in the course of the hearing aggregated \$212,000, while the total assets did not exceed \$150,000. In the list of assets were included the plant of the company at Harvey, covering eight acres, and appraised at \$42,500, and the patents under which the motor vehicles were manufactured, estimated to be worth \$22,000. Of the bills payable to the company, amounting to \$20,000, the receiver succeeded in collecting \$913 in a year.

Import Increase, 101 Cars.

According to figures compiled by Appraiser Whitehead, the imports of automobiles have almost doubled during the first six months of this year, as compared with the corresponding period of 1903. During the six months ended July 1 there were imported 254 automobiles, valued at about \$900,000. In the corresponding period of 1903 there were only 153 cars, valued at \$450,000, imported. Most of the machines imported came from France, of course.

New Tube Mill Near Pittsburg.

Ground was broken at Monessen, near Pittsburg, Pa., on Saturday, for the erection of a new seamless tube plant, to cost \$1,000,000, and which will employ one thousand men. The plant is being built by the Seamless Tube Co., of America, an adjunct of the Pittsburg Steel Co. W. H. Rowe, president of the steel company, is also president of the new tube company. The plant will cover six acres.

"Warren Gentlemen" Seek a Site.

"A party of Warren gentlemen" visited Salem, Ohio, last week and inspected an abandoned lock factory in that place, with a view of securing it for automobile manufacture. The names of the Warren gentlemen are not given.

FRENCH BODY PLANT HERE

Member of Rothschild Firm Here Looking for Site—1905 a Side-Door Year.

On the steamship Lorraine, which arrived in New York last Saturday from France, there were two passengers prominently identified with the automobile industry in Europe. They were M. Leon Auscher, engineer and designer of automobile bodies, and a member of the body building firm of J. Rothschild & Fils, of Paris and London, and Mr. Kellner, also a body constructor of high repute in Europe.

Though ostensibly here to serve on the jury of awards in the transportation department at the Louisiana Purchase Exposition, both gentlemen have other purposes in view in their visit. M. Auscher intends inspecting the great manufacturing centres of the United States, and particularly the steel plants at Pittsburg.

The Rothschild concern has in contemplation the erection in or near New York of a factory for the construction of automobile bodies for use in this country, and M. Auscher will probably look over the ground while here. The only difficulty he foresees is in obtaining skilled workmen.

M. Auscher brought with him drawings of 1905 models in automobile superstructures. These indicate an almost general use of side entrance vehicles. The demand for side entrances, which has been gaining here, is rapidly increasing in Europe, he says, and he predicts that next year few French or German makers will build machines with any other style of entrance. In fact, it seems that 1905 may be predicted to be a "side entrance year." To accommodate this demand chassis are being made longer than before, the wheel base of the new Mercedes, he says, being 108 inches.

Closed bodies of the limousine or demountable top types are also finding great favor abroad, M. Auscher reports. These are being made lighter than formerly by the use of aluminum in the panels and elsewhere. The

coupe limousine, with drop glass to protect the driver's seat, is much affected in Paris, while the "Berline de voyage," or inclosed touring car, is expected to become popular for distance runs next year. Among new styles of bodies are the covered brake with forward, centre and rear seats to accommodate eight; the touring landaulette, with extension top, and the postchaise, a type of limousine with rear entrance.

M. Auscher showed much interest in the electric vehicles he saw on the streets of New York, though he remarked that the electric hansoms in use here are the ugliest motor machines he had ever seen.

How Rubber Prices Have Stretched.

Rubber prices have advanced sharply, and they now stand at the record figures of \$1.16 to \$1.20 per pound for crude rubber. These prices are higher than ever before known in the history of the trade. The highest price at which crude rubber was ever held in this market prior to the present advance was \$1.11, which figure was quoted early in 1900.

There was an advance in rubber last fall which caused much comment in the trade and came near reaching the high water mark of 1900, but it fell short of it by one cent a pound, the price beginning to decline after \$1.10 was reached. This decline continued until January of this year, when the price was only 98 cents a pound. Since the beginning of the present year values have steadily advanced until all former records have been broken.

Chinese Mandarins Inspect Factories.

French automobile factories have recently been visited by ten mandarins from Indo-China, who were brought over on purpose to be impressed with the French automobile industry, and thus to save the Indo-China markets for the French. The mandarins were in charge of the French engineer, M. Letourneau, who conducted them over the most prominent works, and made them familiar with the constructions and handling. A large number of cars were purchased by the visitors, and these will be samples and standards, after which other orders will be moulded.

De Dion Finally Bows to Demand.

It is a significant fact that the oldest and most consistent believers in the small, high speed motor of not more than two cylinders, the De Dion people, are at last about to manufacture a car with a four cylinder engine. A few experimental cars have been built, and later a four cylinder car will be marketed.

Haynes Opens New York Branch.

The Haynes-Apperson Co. have finally taken over their own interests in this territory and have established a branch in New York at No. 1,715 Broadway; F. G. Carrie is in charge. The Brooklyn Automobile Co., who formerly had the Haynes account in this district, have taken on the Yale and the Apperson,

LESSON OF THE BIG TOUR

Harold Pope Points Out How it Proved American Cars for American Roads.

"How much more suitable are American-made cars for the trying conditions of American roads than are imported cars was well illustrated on the long tour to St. Louis," wrote Harold L. Pope just after he had finished that long journey, which he made without trouble in a Pope-Hartford.

"There were 108 entries in the St. Louis tour," continued Mr. Pope. "This entry list comprised about every known type of automobile, from the largest foreign touring cars to the smallest type of runabout. Out of this total number of entries twenty-nine of the cars for various reasons did not start, which left seventy-nine actual starters. Out of the seventy-nine, fifty-eight cars arrived in St. Louis on time, entitling them to a first-class certificate.

"Of the twenty-one which will not be entitled to a certificate, nine reported in St. Louis too late; five more cars are known to be on the road, but will not arrive in St. Louis in the required time, having been delayed for various causes; three machines are known to have broken down, but will be fixed up so that they can complete the tour, although at too late a date for credit; four machines are entirely disqualified through breakages, due to accidents or defects.

"It is an interesting fact that of the greater percentage of breakages were among the contingent of foreign-built cars, which seems to prove the contention claimed by American manufacturers, that foreign-built cars will not stand the strains and stresses demanded by our poor American roads. In the East, where good roads are found, this discrepancy is not so apparent, but in the Middle West, where good roads are a scarcity, the foreign cars were sorely tried.

"In summing up the total showing, 20 per cent of the foreign-built cars were disqualified or broken in this run, with only 2 per cent of the American cars disqualified or broken under the same conditions.

"Two or three years ago it was a common opinion that foreign-built cars were superior in many respects to our American product. The American manufacturers, however, have made wonderful strides during that period of time, and our makers are turning out a product which actual service has demonstrated to be for use on our American roads superior to the foreign-built car."

The Week's Incorporations.

Cleveland, Ohio.—Automobile Transfer Co., under Ohio laws, with \$10,000 capital. Incorporators: G. B. Siddall, O. G. Bechtel, F. A. Quail and G. A. Welch.

Northampton, Mass.—Warner Motor Co., under Massachusetts laws, with \$30,000 capital. Corporators—D. C. Bartlett, president, and R. P. Esty, treasurer.

Wilmington, Del.—The Wilmington Auto-

mobile Co., under Delaware laws, with \$20,000 capital. Corporators—Horace W. Ganse, Joseph Bancroft and Richard R. Banks.

Jersey City, N. J.—The Kahn-Stern Co., formed under New Jersey laws to engage in the manufacture of and deal in carriages, wagons, automobiles, motorcycles and conveyances of every kind; also in horses, cows and "all animals whatsoever," with a capital of \$15,000, in 100 shares of the par value of \$150 each. Corporators—Louis J. Kahn, Emanuel J. Stern and I. and Faerber Goldenhorn. The registered office is at No. 15 Exchange Place, Jersey City.

Court Dismisses Bankruptcy Petition.

An involuntary petition in bankruptcy against the Bouton Automobile Co., a Maine corporation, with its plant in Lynn, Mass., was dismissed after a hearing by Judge Hale in the United States District Court at Portland, Me., on Thursday last.

The petition was brought by Maine creditors, representing claims amounting to \$3,000, who, to support their petition, put in an acknowledgement by the manager of the company that it was bankrupt. The petition was opposed by the Lynn creditors, and Judge Hale, in dismissing it, ruled that the manager had no authority to acknowledge bankruptcy.

Thirty-Three Lucky Lackawanna Creditors.

At a meeting of the creditors of the Lackawanna Motor Company, of Buffalo, on Monday, thirty-three claims were allowed. William C. Carroll was chosen trustee under a \$10,000 bond, and Henry W. Pottle was appointed attorney. On next Monday morning at 11 o'clock a meeting will be held at the company's plant to consider the disposition of the property, and at 2 o'clock in the afternoon of the same day they will meet again in the office of Referee in Bankruptcy Hotchkiss.

Weiant Puts up his Own Sign.

E. T. Weiant, treasurer and manager of the Consolidated Supply Co., Denver, Col., has resigned those offices and is establishing himself at No. 1,534 Glenarim street, Denver, where he will carry the complete line of Fisk tires and a stock of sundries. He will also handle several specialties which he has controlled for some time, to which he expects to add from time to time.

Four-Cylinder Stevens Coming.

The J. Stevens Arms & Tool Co. will be among the rapidly increasing number of makers who will have four cylinder side entrance cars for next season's trade. This new Stevens-Duryea will be of 20 horsepower, with shaft drive, and will weigh 1,600 pounds.

Fire Damages Joliet Garage.

Fire on Thursday last badly damaged the garage of the Joliet (Ill.) Automobile Co., and also scorched three cars that were stored on the premises. The loss was fully covered by insurance.

SHARP STICK FOR A JUDGE

Magistrate Tyson Threatened with Removal by One of His Victims—His Constable Arrested.

L. B. Sharp, of Far Rockaway, Long Island, is making it interesting for a constable and a police justice of Lawrence, Long Island, which adjoins Far Rockaway.

Mr. Sharp was arrested on August 7 for speeding in the village of Lawrence. The officer making the arrest was William Ryan. Mr. Sharp felt that he was being persecuted, and told the village board of trustees so, adding that he would fight the matter to the bitter end unless the case against him was dropped. The village trustees were indifferent. It was alleged that Mr. Sharp's arrest had been instigated by Police Justice Frank L. Tyson, before whom a hearing of the case was had on August 12 and an adjournment entered. After the hearing on that day Mr. Sharp and his brother, E. E. Sharp, had an altercation with Policeman Ryan, and the officer struck E. E. Sharp on the head with a club. Mr. E. E. Sharp, through his counsel, William Willard, jr., had Policeman Ryan arrested on a charge of assault. He was arraigned before Justice Tyson and held for trial later under \$250 bail. While this matter was still pending Mr. L. B. Sharp, on Monday of this week, caused his counsel to apply to the Supreme Court for the removal of Justice Tyson from office, and a writ was granted requiring Justice Tyson to appear before the Supreme Court on Wednesday and show cause why he should not be removed.

At the preliminary hearing of the case against L. B. Sharp on the charge of speeding it came out that Mr. Sharp was driving an electric carriage with solid tires. The complaining witnesses against L. B. Sharp were Deputy Sheriffs Langdon and Hendrickson and Policeman Ryan. All told about the telephone apparatus which had been rigged up beside the road to assist in detecting violators of the speed ordinance. The telephone wire, it was said, was a quarter of a mile long. The three men were stationed along the route. Sharp, it was charged, had gone the quarter of a mile in 1:15, or at the rate of twelve miles an hour.

Ryan, under cross-examination by Willard, said he had measured the quarter-mile course with J. H. P. Vandewater, Commissioner of Highways.

"What sort of tape did you use?" asked Willets.

"One that goes into a steel coil."

"How long was it?"

"Oh, about one thousand feet."

"How many times did you double it up?"

"Ten or twenty times." The answer caused a laugh, and the policeman looked surprised.

It was after the first appearance of L. B. Sharp before Justice Tyson that the trouble with Policeman Ryan occurred. After that first hearing Ryan and Sharp had an argument on the steps of the courthouse. In the

course of it E. E. Sharp, brother of the defendant, made a move toward Ryan, and the policeman, it is charged, struck him on the head with his club. A fight followed. Sharp was put to bed suffering from severe scalp wounds.

When Ryan was arraigned before Justice Tyson, in Far Rockaway, Willets, attorney for Sharp, said his client was too ill to appear, and the hearing was adjourned, the policeman being held in \$250 bail.

The Automobile Club of America became interested in the case, and L. B. Sharp expects to be acquitted of the speeding charge.

In proceeding against Justice Tyson, Lawyer Willard alleged that Justice Tyson had been appointed contrary to law and that he had not been a resident of either the county or election district long enough to make him eligible to vote or hold office in the village of Lawrence. The lawyer said that Tyson had lived in Clinton avenue, Brooklyn, up to May 5 of this year; that on that date he had moved to Cedarhurst, Long Island, and resided there until July 22, when he moved to Lawrence and was appointed to the office of police justice the day following and took office on July 29.

This, Lawyer Willard pointed out, was illegal, inasmuch as the law requires that a man shall be a resident of a county four months and the election district thirty days before he can either vote or hold office.

Justice Dickey granted the writ applied for and signed an order summoning Police Justice Tyson to appear before him and show cause why he should not be barred from sitting in justice on the case against Sharp.

It is said that this is the first case of the kind that has occurred in the State. The usual procedure in determining the eligibility of a police magistrate to hold office is to appeal to the Attorney General of the State. Lawyer Willard, however, saw the opportunity of thrashing the matter out in habeas corpus proceedings in the interest of his client.

Mr. Sharp is severe in his criticism of Police Justice Tyson, so far as automobile fines are concerned. The village of Lawrence pays its police magistrate a salary of \$100 a year and fees.

On Tuesday morning Justice Tyson went before Judge Dickey in the Supreme Court and obtained an adjournment of the hearing in his case until Friday.

Mr. Sharp's lawyer said on Wednesday that he had discovered another count on which he could invalidate Justice Tyson's position. The charter of Lawrence, he says, does not permit a police justice who receives a salary to accept fees also.

Sensational Shooting Story Spoiled.

A report from Worcester was telegraphed to the New York papers last Thursday to the effect that Simon Kamenski received a rifle bullet in his breast while driving in his automobile near Putnam, Conn. Secretary Butler of the Automobile Club of America went to the scene to investigate, and discovered that Kamenski was a peddler, and that he was driving a horse when hit by a small bullet from a boy's rifle.

FOR VANDERBILT CUP

Long Island Authorities Grant Permission to Use Roads—Three Nations Will Compete.

A permit was obtained on Tuesday from the Board of Supervisors of Nassau County, Long Island, for the holding of the Vanderbilt cup race over the "short triangle" on October 8. A. R. Pardington, chairman of the Racing Board of the American Automobile Association, waited upon the board at Mineola, and his request for a cessation of the speed limit over the course on the day named was acceded to.

It was agreed that the county shall provide men to police the course during the running of the race and the expense of police arrangements will be met by the A. A. A.

The route will comprise parts of the Jericho, Hicksville and Hempstead turnpikes, with turning points at Queens, Jericho, Central Park and Hempstead. The course is said to measure thirty-two and one-half miles, and the roads are among the best to be found on Long Island.

It is planned to start the race near the pumping station on the Jericho road, and after ten circuits of the route finish it at Hempstead, making a total distance of about three hundred miles.

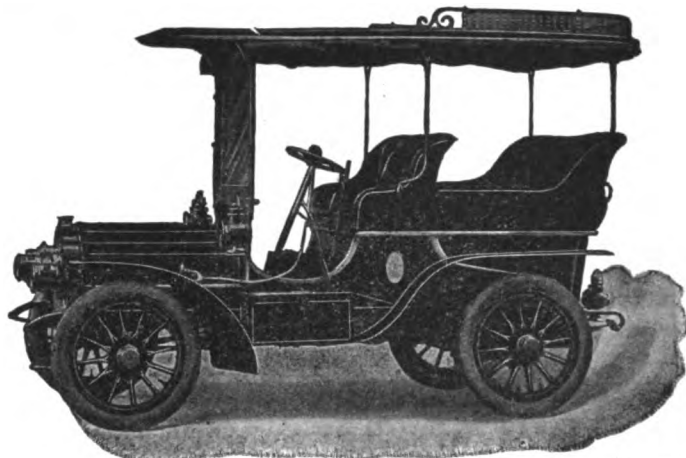
Cable messages to individuals were received during the week which gave assurances that two Napier cars will be entered for the race for the Vanderbilt cup. Two Whites and two Panhards already have been formally nominated.

To Abolish Police "Rake Off."

One of the great evils of the police system in rural villages has been that of offering constables prize money for the arrest of automobilists, or of giving them part of the fines. A laudable effort is now being made to rid Suffolk County, Long Island, of this system, and it is probable that Suffolk will soon have uniformed officers patrolling the highways and making arrests of automobilists. The uniformed men, it is planned, shall receive suitable pay, be governed by rules and have a responsible chief. The establishment of such rules and police force is expected to do away with the conflicting rules and also with the reward seeking constables who hold up automobilists at any time and charge them with violating the law.

If these things are brought about it will be the result of a petition drawn by Judge Wilmot M. Smith, of the Supreme Court, after a conference with wealthy automobilists in that section, including Robert B. Roosevelt. The petition has been signed by the Roosevelts, Suydams, Bournes, Livingstons, Havemeyers and other families in that section.

It is believed there will be an end to the reward system as soon as the bills of the constables reach the supervisors. One constable at Patchogue has about \$500 due him as rewards. This is easy money for him, and it is believed there will be a howl of indignation when the county is called on to pay thousands of dollars for a few arrests.



The 1904 Haynes

1904
Tonneau

TWO MODELS

1904 Light
Touring Car

Tonneau, \$2,550, with top and front glass, two Solar No 1 gas headlights two Dietz Regal oil lights, tail light, horn with tube, and full equipment. \$2,450 without top and front glass.

Light Touring Car, \$1,450, having much the same outward appearance as our famous Runabout of 1903, but of higher power and capacity and distinctly a powerful touring car—not a Runabout—the most highly developed car of its type—the perfected product of the oldest makers of motor cars in America.

We originated the use of aluminum castings in gas engine construction and, making our own composition and castings, have brought them nearest perfection. Our invention is universally imitated, but never equaled. See the catalogue.

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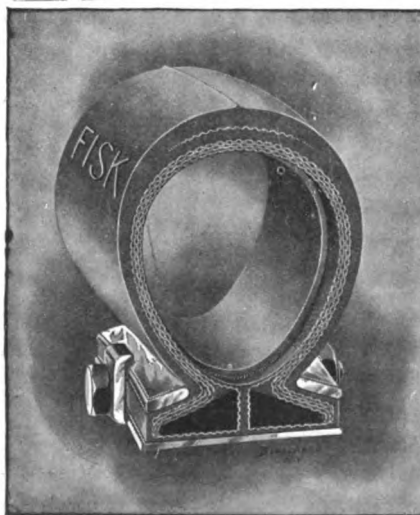
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WHY DO AGENTS WANT Fisk Detachable Tires?

Can be easily and quickly
repaired on the road.
Air chamber entirely above
the rim.
Impossible to pinch the inner
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Have a clean record.
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Pictures that Should be Turned Toward the Wall.

While not decrying the value of speed, for the good of the industry it would seem about time that those concerned with it realized the importance and influence, if not necessity, of accentuating other virtues of the motor car.

Pictures play no inconsiderable part in arresting and interesting and influencing the public, and to date it is fair to say that that placard or show card or poster that does not have speed as its foundation is rare, indeed. Of course, we know that it is the aim of every artist to give "life" and "action" to his illustration, and that therefore the speed of automobiles affords ready inspiration for his fancy and his brush.

The result is an extensive display of pictures differing only in execution; the idea is ever the same. The veils or the hair of the women passengers may be flapping more vigorously in one picture than in the other,

or their clenched hands may appear to hold their hats with varying degrees of firmness, but always and since the beginning this has been the unvarying type of "automobile girl." But, tiresome and suggestive of discomfort as she has become, she is the acme of grace and attractiveness when compared with the artist's conceptions of the men who use automobiles. At best, they are usually depicted flying through space in attitudes suggestive of violent attacks of cramps and as often, their drawn, distorted faces and bulging eyes heighten the idea of physical distress. As a variation, the driver is occasionally portrayed as a crouching highwayman, whose hunted, anxious features are made more hideous by protruding goggles or repulsive masks.

Save that it makes easy the way of the artist, there is no good reason why this order of picture should remain the vogue. There are many more reasons why it should be departed from, and quickly. The impression that speed is the chief use and attribute of the motor car is already too prevalent, and such pictures but serve to more firmly fix it in the public mind. It may be true that they have influenced the sale of many cars, but we believe it is as true that they have prevented sales. It is not to be denied that there are very many people able to possess them who remain to be convinced that all automobiles are not dangerous "red devils."

When it becomes the practice to as generally and as brilliantly color the safety, the ease, the pleasure, the adaptability and the manifold uses of the motor cars as employed, not by dizzy chorus girls with taffy hair whipped by the wind or driven normally not by masked men of demoniacal expression, with bodies bent, teeth set and apparently fearful that their next moments will be their last—when this order changes and it becomes the rule to portray normal men and normal women in pleasurable attitudes and in pleasant places, the tradespeople who now pay the price of the "red devil" pictures will have served their interests and the interests of the whole trade a good turn.

Evidence of Electric's Popularity.

Evidences are multiplying to show that the electric vehicle has worked out its own salvation as a town conveyance and that it has pre-empted a permanent place peculiar to itself in the field of private and public livery service.

In France the reports show that the number of electric vehicles has been increased by

200 or 300 per cent within the last year. Firms manufacturing electric vehicles and those using them for public service are showing every sign of prosperity.

The improvement in batteries, motors, vehicles and tires has been steady on both sides of the Atlantic, one of the notable advancements made in this country having been the production of the proper solid tire for the cab service. The tire makers are blocking progress somewhat, however, because they fail to realize, or at least to show in a practical way, a realization of the fact that the same composition which proves most economical for cab service, or for delivery wagons, will not do at all for vehicles of much greater weight. As the general adoption of electric vehicles for private stables in town, and also for livery, hinges on the cost of maintenance, this subject of tires is one of great importance.

Meantime the indications are that the electric vehicle is to enjoy a winter of more general and extensive use in the big cities of America than ever it has had before, not to mention the fact that one corporation is preparing to launch a new system of electric 'buses in New York City, while a college in Brooklyn has decided to transport all its pupils in electric 'buses from their homes and boarding houses to the classrooms throughout the winter.

What has Retarded Motor Wagons.

Mr. Harold Eames, whose facts and figures on the subject are presented on another page, appears of opinion that, generally speaking, not even the automobile trade and press have properly appreciated that the commercial vehicle is "a work successfully accomplished."

It is fair to say that the statement is essentially correct. But the subject is a broad one, and capable of much argument. It is one in which the Motor World since its foundation has been earnestly interested; it has repeatedly sought to turn the trade's attention in that direction. But the trade, while professing interest and apparently sharing the oft reiterated assertion that its future rests largely on the commercial vehicle, has been more prolific of intentions and words than works.

None save the blind could fail to observe, however, that the motor wagon, the electric in particular, has gradually crept into more extensive use; but it is another trend of the "irrational expectation," to which Mr. Eames refers, that has prevented substantial and

widespread recognition of the fact. Rightly or wrongly, the idea that the automobile was a wonder worker which must sweep the horse out of harness—that the farmer, the butcher, the baker, the candlestick maker would all turn poor Dobbin adrift—has obtained lodgement in the public mind; enthusiastic essayists and polished post prandial speakers wrote and prattled glibly to that effect, and dealers in “ton miles” helped the suggestion. As Mr. Eames states, the business automobile has been retarded by the false notion that for each form of power there is a fixed and definite expense account. Merchants who shared the notion were among those who had the unwisdom brought home to them. The general press and public has not acclaimed the motor wagon, because, despite the claims of the essayists and post prandial speakers, the horse remains overwhelmingly in evidence.

The automobile press, or the Motor World at any rate, was several months since brought face to face with the hard and fast and unequivocal statement delivered by one of the earliest and best posted of those who have dealt with business automobiles.

“No one man with one horse and wagon ever will be put out of business by one man with a motor wagon,” he asserted emphatically. “The item of cost and expense is all in favor of the former.”

The information was imparted as something of a state secret, and was, and possibly is, not of a nature for general publication. But Mr. Eames's statement opens up the whole subject and makes occasion for bringing it to light. If the assertion is unsound it should be routed. If it is correct it is well that the truth be known. There is nothing so costly to an individual or an industry as self-deception.

Almost on the face of things, and without resort to figures, it is plain that for long hauls or heavy hauls, or even for light but continuous service, the economy and earning power of the self-propelled wagon are far superior to those of the horse-drawn vehicle. But the farmer and the butcher, the baker, the laundryman and other small shopkeepers who maintain but one horse and wagon, or, say, two, rarely have occasion for long hauls or heavy ones, and seldom have a sufficient volume of business to keep their horse or horses continually “on the go.” There often are several hours of each working day when the animal is idle, and not infrequently longer periods when he is confined to his stall, “eating his head off,”

without being able to earn his feed for that particular period.

In New York City it is possible for these small storekeepers to stable a horse and wagon for \$25 per month, while the cost of upkeep will not exceed \$50 per year. With the first cost of a horse and wagon hardly more than one-fourth that of a motor wagon, it is readily apparent that the latter has at once a tremendous handicap to overcome to meet the favor of the small merchant.

These are figures given us by a New York retail grocer who has long maintained two horses and two wagons, and who knows whereof he speaks. His business entails few long or heavy hauls, and we all know that less prosperous grocers and shopkeepers find it more economical to employ two or three small boys than even one horse and wagon to collect orders and make deliveries. To the other shopkeepers the horse-drawn vehicle and the power-propelled one bear similar relation.

If this is not the case—if such shopkeepers, each with one motor wagon, really can successfully compete with their rivals operating one horse wagon—it cannot be demonstrated too quickly.

If, and it is undoubted, that the business automobile has suffered from irrational expectation of purchasers, we believe it has been retarded as much or more by the well meaning but unthinking utterances of too enthusiastic partisans. They have pitched their claims too high in striving to reach “the horse must go” key. It has led to unreasonable and unwholesome anticipation and consequent disappointment.

“Shooting 'Em up.”

Whatever Magistrate Cornell, of the New York police bench, actually did say regarding the shooting of automobilists, what he was reported to have said, namely, that a man would be justified in shooting an automobilist who frightened his horse or endangered his person, has travelled far and wide about the country and is bringing woful and staggering results.

From East and West come stories of automobilists being fired upon, not only with revolvers, but with rifles and shotguns—it has not yet reached the stage of artillery attacks.

In the face of these facts a howl has gone up from the daily press because of a report to the effect that the Automobile Club of America has advised automobilists to travel armed. The Automobile Club has not offi-

cially issued such advice, but some of its members have said that motor car users would now be justified in carrying arms on the road.

Any man belonging to a class against which there is being waged an armed feud by frenzied outlaws is guilty of stupid folly if he does not carry arms.

The Automobile Club of America meanwhile is busy trying to lock the stable door after the jackass has escaped. It is industriously leading the hunt for the culprits who have committed the recent assaults. An ounce of prevention would have been better. If the Automobile Club had only had the backbone to have gone on in its effort to depose Magistrate Cornell from the bench the effect would have been more salutary than prosecuting those who are following his alleged advice. If the news had gone broadcast that Magistrate Cornell was in danger of losing his office because of the remark accredited to him, it would have done more to discredit his advice with the hotheads who are following it than the explanation made by the magistrate. If the effort to depose him had been successful, it would have checked the “shooting up.” If it had been determinedly prosecuted, even though unsuccessful, it would have been partly effectual, for the news of the prosecution would have travelled as the explanation has not.

Poor old backbone!

Gradually, but surely, the motor car is crowding its way into the service of the public departments. City and county commissioners and government officers, here and there, have requisitioned them into the service, one at a time, and the knowledge of their qualities in general is rapidly increasing in official circles. This affords a pin upon which to hang a hope for more intelligent and just legislation and more discriminating enforcement of the laws in the near future.

What would be said if any one proposed that the United States government should encourage automobile racing? In Belgium, however, this is done. The Belgian Minister-President, Count de Nayer, has given the promise to include into the 1905 budget an amount of 50,000 francs, to be given as prizes for the best automobiles and to the most skilful drivers. The encouragement will be another impetus to the Belgian motor industry to develop its scope and strive for leadership in the automobile field.

CLEVELAND RACE MEET PROVES SENSATIONAL

Earl Kiser Gives an Electrifying Performance and Twice Lowers the Mile Record—How He Unwittingly Closed Fisher's Carburetter and How Fisher "Turned Turtle"—Lyttle and Soules Do Good Work.

Cleveland, O., Aug. 22.—Earl Kiser hitched his name to a star to-day, and it is soaring brilliantly high up in the firmament of motor cars. He did so at the first day's meet of the Cleveland Automobile Club—postponed from Saturday because of rain—and the way he did it will not be soon forgotten by the five thousand people who witnessed the performance. He twice smashed the mile record, bringing it down first to 54 seconds and later to 52.4-5, and it was his first flight that was attended by circumstances that made his fame secure even if the creation of the new figures was not sufficient for the purpose. It all happened in the five-mile race for the Diamond cup—that trophy presented by the Diamond Rubber Co., which unthinking papers and people persist in unwarrantedly terming the "Manufacturers' Challenge Cup"—and though Kiser and the Winton Bullet finished second to Lyttle and the Pope-Toledo, he made such a race of it as never had been witnessed before. It brought five thousand people to their feet howling like mad and performing such antics of acclaim as rarely are seen in public. It was well worth the fine frenzy. A few more such contests and the future of automobile racing and the fortunes of race promoters would be safe; it will be necessary to employ a regiment of soldiers to keep back the crowds that would come. And, strangely enough, the electrifying spectacle was due to an accident. Just after crossing the line, Kiser's motor stopped dead. Before it could be restarted he was five-eighths of a mile to the bad of such formidable competitors as Lyttle and Fisher, the one in an eight-cylinder Pope-Toledo, the other in an equally powerful Premier, and two others. Kiser himself was driving the Winton Bullet No. 2. When he set out to make up the great gap it seemed a forlorn hope. The big, thundering Pope car was far in the van, and, though he drove like a demon, it is safe to say that none fancied that he would ever overhaul the flying machines ahead of him. But slowly he gained; now he passed the tailender, then overtook the next one, and the crowd buzzed, but it was not until on the fourth mile, when he passed the superbly driven Premier Comet, that the spectators really woke up. He was then closing fast on the great gray monster that remained ahead of him, and men "rose to their feet" to better view the magnificent chase, the while roaring encouragement. But it

did not seem that he could close the stretch of daylight; time and distance appeared too short. But when he rounded into the home-stretch, swinging wide, and drew close up to his quarry, the crowd fairly quivered with excitement, and a roar as of a tornado went up. The sound of it reached Lyttle in the Pope-Toledo, who turned his head for a fraction of a section, but, short as it was, it nearly cost him the race. Kiser had his eye on him, the giant machines thundered up the straight, the low, rakish looking Bullet coming faster and faster at every turn of the wheels, until, as they shot over the tape, but half a wheel's diameter separated them. The Pope-Toledo was still to the fore, but the Winton passed it in the next twenty-five feet.

Had there been this distance or even less to go, the Bullet would have won. As it was, pandemonium broke loose, and when it was announced that Kiser's last mile had created a new world's record and a new champion had arisen, the joy of the crowd knew no bounds. As Kiser drove back, his round, cherubic face, plastered with the damp, yellow clay of Glenville track, was radiant with smiles. The winner was forgotten, and the second man given an ovation. Alexander Winton was one of the first to congratulate him.

"The K(a)iser is king!" was of course quickly passed along the line, every one being as a unit in praising the skill and daring of the nervy little driver, who had never been in the machine until two days before.

In passing, it may be remarked that Carl Fisher, driver of the Comet, and regarded by many as the most intelligent and skilful driver in the country and as the peer of both Kiser and Oldfield, is authority for the statement that the first time Kiser ever sat in a racing machine (the Mohawk) he circled the track the first time round in 1:06.

Of the Pope-Toledo it was learned after the race that but six of the eight cylinders were working during the last two miles or more, and, while this explains the enormous gain made by the Bullet, it detracts not one whit from the spectacular performance of Kiser, whose proportionate speed for the five miles was figured out as about a 4:40 clip.

In considering the wonderful performances of to-day, it must be borne in mind that track conditions were wellnigh perfect; the heavy rains of Friday and Saturday, which had occasioned the postponement of the races, and the warm sun of Sunday, had left the track heavy but hard, so that, despite

the terrific speed, there was absolutely no skidding on the turns, and no dust.

In the five-mile "special race" for the three eight-cylinder cars, Fisher, in the Comet, was the victim of a peculiar accident which put him out of the running. He had passed the Pope-Toledo, which was again behaving badly, was overhauling Kiser and the big Bullet by a splendid burst of speed on the backstretch, when all at once he was seen to slow down and fall back, and was barely able to get across the line. Big chunks of mud, thrown back by Kiser's rear wheels, had landed squarely in both carburetters, the unprotected air-vents of which were directly in front, choking the mixture and putting an end to what was Fisher's most promising chance of the day. Two big handfuls of mud were afterward scooped out of the carburetters.

It was in this race that Kiser set up the new figure of 52.4-5 for the mile—the last mile of the contest. Of course, Doubting Thomases promptly made themselves heard, and they did not fail to point to the great difference of eleven seconds between the fourth and fifth miles—the fourth mile was run in 1:03—but the timers were all men of such reputation and ability as to silence the skeptics.

When Kiser first broke the record the Motor World man was standing near Mr. Winton, when the latter remarked: "I gave him orders to break that record. If he had not done so I'd have tried it myself. And I'd have done it, too," he added, determinedly.

The races between the big cars, of course, constituted the feature of the day, but the manner in which George Soules, in his Pope-Toledo, accounted for the touring car event and the handicap, and in which Russell (Cadillac) defeated Winchester (Franklin), were matters of remark, as also was the skilful manœuvring of a Baker electric by little Miss Stevens, aged eleven, in the obstacle race.

The summary:

One hundred yards obstacle race—Won by Miss Oriana Stevens (Baker). Time, 0:49.2-5.

Two miles for runabouts—Won by George Russell, Cleveland (Cadillac); W. F. Winchester, Syracuse (Franklin), second; W. C. Baker, Cleveland (Baker), third. Time, 4:37.

Five miles for Diamond Cup—Won by H. H. Lyttle, Toledo (Pope-Toledo); Earl Kiser, Dayton (Winton), second; Carl C. Fisher, Indianapolis (Premier), third. Time, 5:24. W. F. Winchester, Syracuse, and Charles Gorndt, Cleveland, also started.

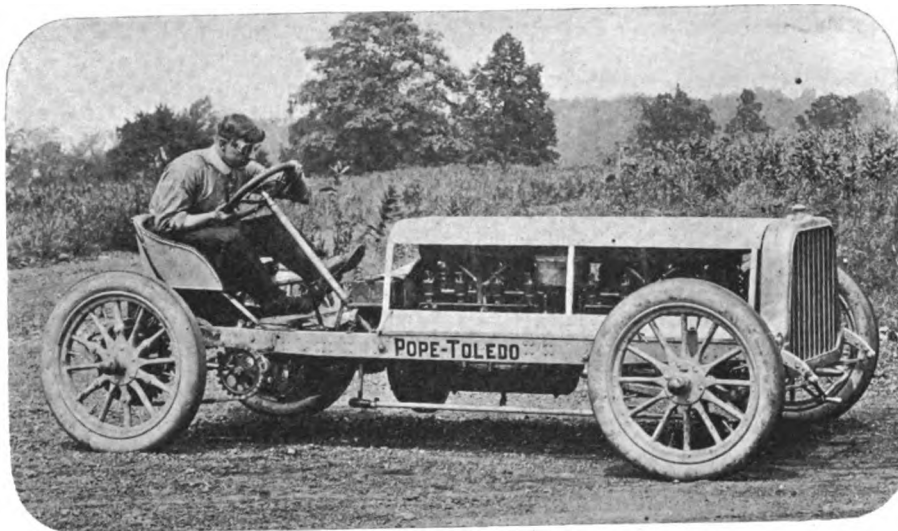
Five mile handicap—Won by G. Soules,

Cleveland (Pope-Toledo) ($\frac{3}{4}$ mile); Carl C. Fisher, Indianapolis (Premier) ($\frac{1}{4}$ mile), second; Charles Gorndt, Cleveland (Winton) ($\frac{3}{4}$ mile), third. Time of winner, 4:53. Time of scratch car, 5:44 1-5. Earl Kiser, R. H. Magoon, A. E. Morrison and W. F. Winchester also started.

Two-mile motor bicycle race, open—L. F. Manley, Cleveland, won; S. J. Clubbuck, Toledo, second; A. B. Koffman, Toledo, third. Time, 3:13 2-5. John Sabo, Cleveland, also started.

Five mile, open, for stock touring cars—G. Soulas, Cleveland (Pope-Toledo), won; A. E. Morrison, Boston (Peerless), second; E. Messerly (Royal), third. Time, 5:51 2-5.

Five miles for eight-cylinder cars—Earl Kiser, Dayton (Winton), won; H. H. Lyttle, Toledo (Pope-Toledo), second; Carl Fisher, Indianapolis (Premier), third. Time, 4:51. The last mile was in :52 4-5.



H. H. LYTTLE IN HIS EIGHT-CYLINDER POPE-TOLEDO.

Cleveland, Aug. 23.—Seven thousand spectators, a bumper house, aroused and attracted by the reports of Kiser's spectacular performance of yesterday, attended to-day's races. They hoped in vain for a repetition of that thrilling drive, but they witnessed racing of a high order, and also saw Kiser concerned in an episode not on the programme and not without mild excitement. It occurred in the mile open, best two in three heats. While getting ready Kiser's car caught fire; it was extinguished and the start delayed, but on the next attempt the fire again broke out, and forced the record breaker to retire. It enabled Lyttle, in the big Pope-Toledo, to win in straight heats with the greatest ease, and his victory recalled to many that, due to the excitement, the performances of the Pope cars the day before had not been properly recognized. They had won three of the four events to which they were eligible. To-day they accounted for two more.

The greatest excitement of the day was caused by Fisher and the Premier Comet. In the ten miles open, which Kiser won handily, the big car injured an axle in nego-

tiating a corner, and the wheel buckling it turned turtle while going at a mile a minute clip. Fisher was thrown out, of course, but miraculously escaped with a few bruises.

Kiser, in Bullet No. 2, made an attempt to break the five mile record, but fell short, doing 4:48 2-5; fastest mile, 0:57 2-5. Alexander Winton himself could not resist the temptation, and then tried to better the figures. Result, 4:55 2-5.

The summary:

One mile open, in heats: First heat—Won by H. H. Lyttle (Pope-Toledo); second, Chas. Gorndt (Winton Bullett No. 3); third, W. F. Winchester (Franklin). Time, 1:10.

Second heat—Finished in same order. Time, 1:11 4-5.

Five-mile, for touring car with road equipment—Won by R. H. Magoon (Pope-Toledo); second, A. E. Morrison (Peerless); third, Paul Gaeth (Gaeth). Time, 1:04 2-5.

Ten mile open, handicap—Won by E. Messerly (Royal); second, George Soules (Pope-Toledo); third, Charles Gorndt (Winton Bullett No. 3). Time, 10:26 3-5.

Five mile motor bicycle handicap—Won by L. E. Manly (Rambler); second, John Sabo; third, S. J. Chubbuck (Yale). Time, 8:05.

Five mile, for touring cars, stripped—Won by F. B. Stearns (Stearns); second, E. Messerly (Royal). Time, 6:19.

Ten mile open—Won by Earl Kiser (Winton Bullett No. 2); second, Charles Gorndt (Winton Bullett No. 3). Time, 10:05 2-5.

Earl Kiser, in Winton Bullett No. 2, five miles, against time. Time, 4:48 3-5. Best mile, :57 1-5.

Alexander Winton exhibition, five miles. Time, 4:55 2-5.

The men of Warsaw, N. Y., who are interested in automobiles have formed the Warsaw Automobile Club. Levi A. Cass has been chosen president; E. M. Couder, vice-president; L. H. Davis, secretary, and F. J. Dillon, treasurer. The Gredley Hotel has offered a cup to the winner of a series of races, to be held on August 27, September 3 and 10.

OLDFIELD AT OMAHA

Cleveland Crack Goes West and Makes the Western Flesh Creep by Spectacular Work.

Omaha, Neb., Aug. 23.—Barney Oldfield was practically the "whole thing" at the meet of the Omaha Automobile Club to-day.

The inducements offered to him to come here were sufficient to have him forego the race meet at his home place, Cleveland, and he appears to have been worth his price. Omaha folk had never witnessed such spectacular speeding and wide, daredevil swoops around turns, and as Oldfield also created new records for the half-mile track, he may be said to have left his wheel points in Omaha's sands. He first covered the distance in 1:15 2-5, and later bettered this time by doing 1:13 3-5.

Hartford Club Incorporates.

Articles of association of the Automobile Club of Hartford have been filed with the Secretary of State of Connecticut. The association is formed to promote the interests of automobiling, and to aid in protecting the legal rights of the members. The incorporators are J. Howard Morse, Leonard D. Fisk, A. W. Gilbert, Frederick S. Belden, W. T. Plympton and Thomas W. Hooker.

Must Toot Their Horns.

"Blowing his own horn" will become a common practice with Valparaiso (Ind.) motorists. The City Fathers, in their sublime wisdom, have passed an ordinance requiring that horns shall be blown at every street crossing. The penalty for violation is \$5 to \$100.

Progress in South America.

The Argentine Republic is coming on. The Argentine Automobile Club has been formed. Four years ago the first motor cars were introduced in Buenos Ayres, which town holds now over five hundred such vehicles, and the number is quickly increasing. The field is worth cultivating.

The Smell Offended Them.

Two hundred residents of Wimbledon, England, recently presented a petition to the local council complaining of the smell of the numerous motor cars on the roads leading to Epsom. They asked that the cars be stopped altogether, alleging they are dangerous to life and depreciated the value of property.

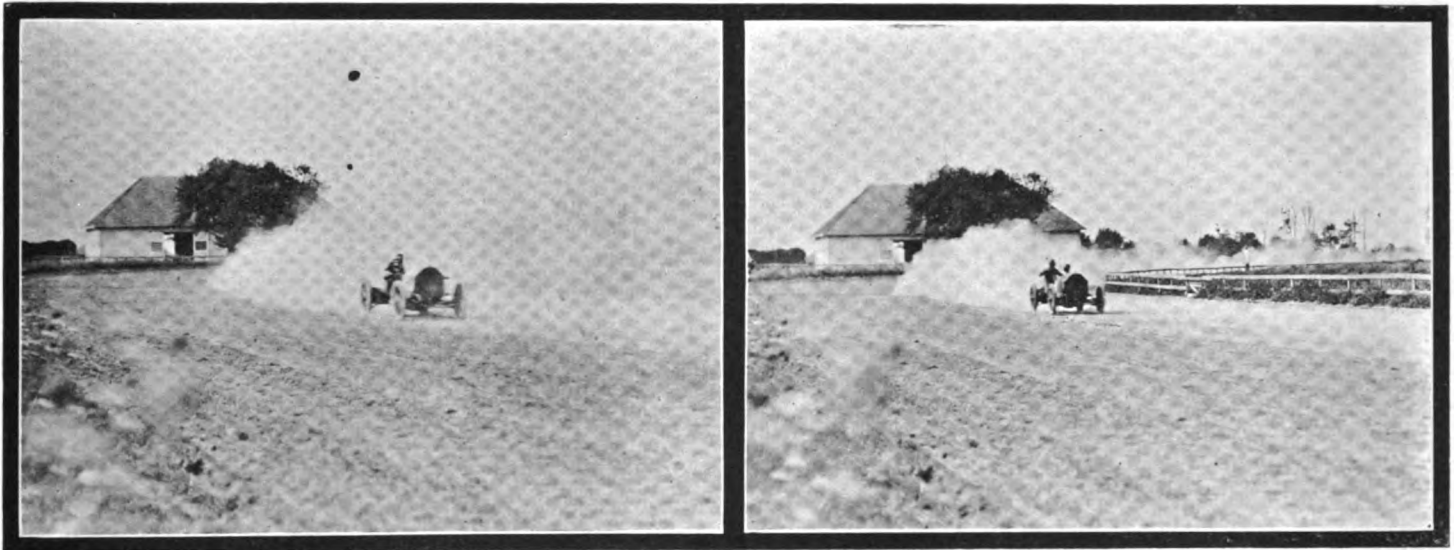
Again After Chicago-New York Record.

Jerome A. Ellis and A. G. Schmidt, of Chicago, left that city at daybreak on Tuesday to attempt the fracture of Bert Holcomb's Chicago-New York record. They tried once before and failed, the mud overwhelming them.

May Race in Pyrenees.

The Pyrenees have been proposed for the next Bennett race, which, of course, will be organized by France. A route of 120 kilometres has been mapped out leading from Tarbes via Lourdes, Argeles, Luz, Bareges, La Tournaiet and Bagnères.

Rain Mars Close of Jersey Coast Carnival.



HARKNESS EMERGING FROM CLOUD OF DUST CREATED BY THOMAS'S MERCEDES.

On the whole, the first automobile carnival held on the New Jersey coast last week, chiefly at Long Branch, was a success. The summer residents of the hotels and cottages abandoned all wonted pleasures in honor of the motor car events, and seemed highly edified. While nothing startling was done in any races, and the only records broken were those from twenty-six miles to sixty, by H. S. Harkness, as related in the Motor World last week, still the racing was interesting and at times exciting.

The racing on the track at Elkwood Park, Long Branch, was continued on Thursday, and a good crowd was present. On Friday the scene was shifted to a few miles further down the coast, at Spring Lake, where a floral parade was held, followed by races on the boulevard. All went well until Saturday, when the big floral parade was to be held at Long Branch. Then it rained. In the morning it seemed as if a second deluge had begun and the roads were converted into canals. It cleared at noon, and the parade was held, as scheduled, but all plans had been upset by the rain and it was a sorry affair. On Thursday Chairman Pardington arrived on the scene, and after that he was the referee of all racing.

TRACK RACES, THURSDAY.

At the Elkwood track on Thursday the gymkhana events were the most attractive. Frank Sybley, H. R. Lounsberry and R. Newton were the entries. The first contest was a standing start with a woman in each car. A trip was made around the track, turning hurdles, before passing the finishing tape. Lounsberry finished first, in 2:54 1-5; Newton second, and Sybley third. The next was starting at the quarter-mile post, stopping with the tape between the front and hind wheels of the machine. Lounsberry was again successful, with Sybley second and Newton third.

In the water contest each woman carried a glass filled to the brim, and the woman making the circuit of the track spilling the least water received a point. In the cars were Mrs. J. A. King, Miss Louise Corwin, of Middletown, N. Y.; Miss Anide King and Mrs. Newton, Mrs. George A. Banker, Mrs. "Ed" Hawley and Mrs. A. L. McMurtrie were the judges in the next contest, which aroused considerable laughter. The women in the cars were judged as to whose hat and veil was the most correct. Miss Corwin won.

The final award went to Lounsberry, with 11 points; Sybley was second, with 9, and Newton third, with 7.

The ten-mile challenge race between the 60 horsepower Mercedes cars of E. R. Thomas and H. S. Harkness was intended for a pursuit race, but the Harkness machine broke down after going five hundred yards, which left the race open to Mr. Thomas's car, driven by Edward Hawley.

The one-mile, best two in three heats, for machines costing from \$650 and under, brought out three Oldsmobiles, belonging to R. G. Howell, of New York; F. Tobias, of West End, and W. H. Parker, of Long Branch. They finished in the order named.

The special one-mile match race, for gold and silver medals, between Mrs. C. C. Miller, of Long Branch, and Mrs. A. L. McMurtrie, of Baltimore, was one of the entertaining contests of the day. Both drove Waverly electric cars. Mrs. Miller won by nearly a quarter of a mile.

E. R. Thomas's car started from the scratch in the five-mile handicap race, and could not overcome the handicap of four minutes allowed the Newton car, which won the race. Tracy, with a handicap of one minute, was second, and Thomas's car was third. The other entries in the race were Lounsberry's Meteor, with a handicap of one and a half minutes, and the Stockbridge Olds, with a handicap of four minutes.

The one-mile open race, for machines cost-

ing from \$2,500 to \$5,000, went to Joseph Tracy, in his 36 horsepower Royal. The other starters were Charles Greuter, of Holyoke, Mass., with a Matheson car, and H. R. Lounsberry, of New York, with a Meteor. They were sent off with a flying start. Tracy's time was 1:19; Greuter's 1:24 and Lounsberry's 1:34. Summary:

Ten-mile challenge race (open to all)—Won by E. R. Thomas (Mercedes). Time, 10:40. The time by miles, 1:12, 2:15 2-5, 3:18, 4:20 2-5, 5:23 1-5, 6:27 2-5, 7:30 4-5, 8:33 3-5, 9:36 and 10:40.

One-mile (open to machines costing \$2,500 to \$5,000)—Won by Joseph Tracy (Royal); Charles R. Greuter (Matheson), second; H. R. Lounsberry (Meteor), third. Time, 1:19.

Five-mile handicap (open to all)—Won by Richard Newton (Autocar), with 4 minutes handicap; Joseph Tracy (Royal), 2 minutes, second; E. R. Thomas (Mercedes), scratch, third. Time, 8:09 1-5.

One-mile (for machines costing \$650 or under)—Won by R. G. Howell (Oldsmobile); F. Tobias (Oldsmobile), second; W. H. Parker (Oldsmobile), third. Time, 2:20 2-5.

Gymkhana race—Won by H. R. Lounsberry (Meteor); Frank Sybley (Berg), second; Richard Newton (Autocar), third.

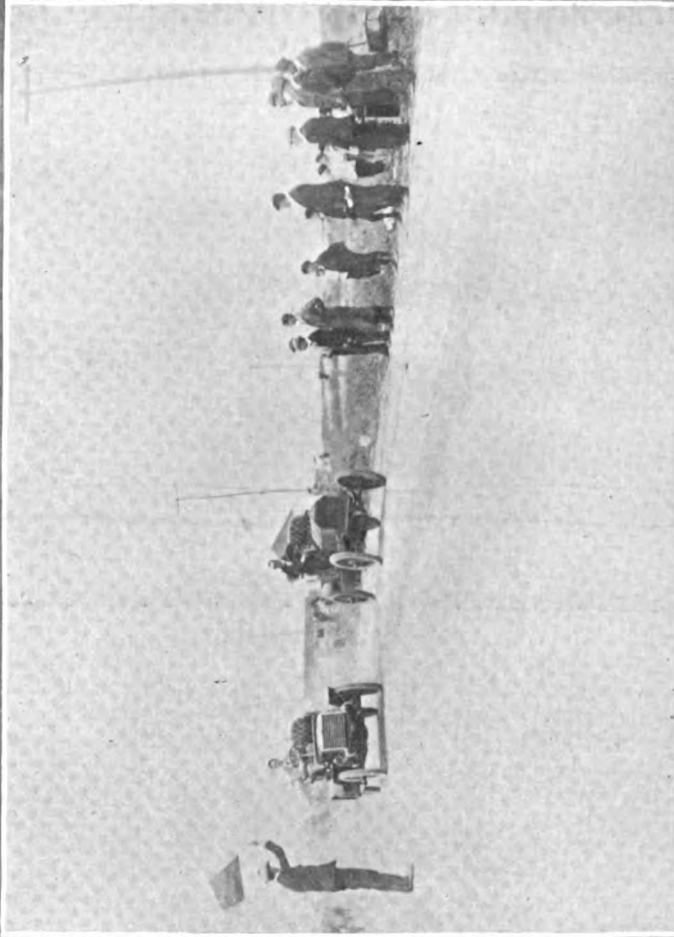
One-mile match race (for electric vehicles)—Won by Mrs. C. C. Miller (Waverly); Mrs. A. L. McMurtrie (Waverly), second. Time, 3:06 2-5.

SPRING LAKE RACES, FRIDAY.

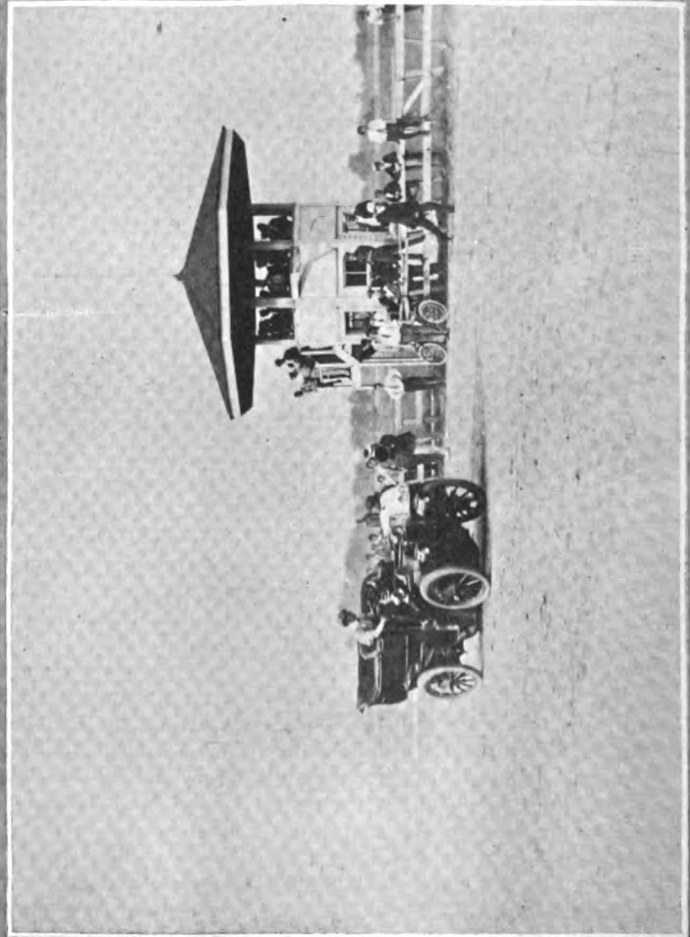
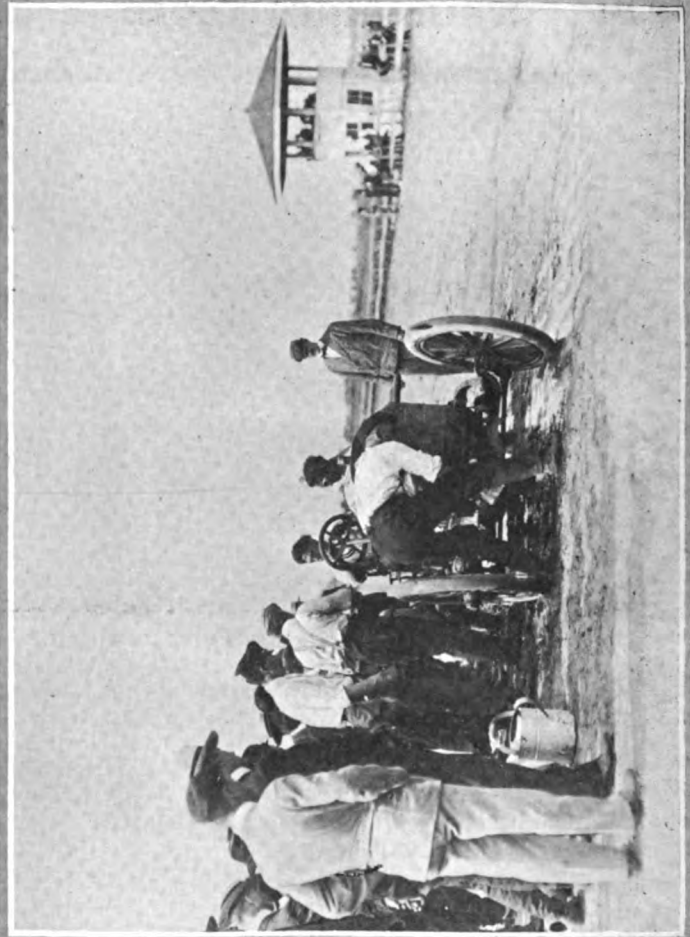
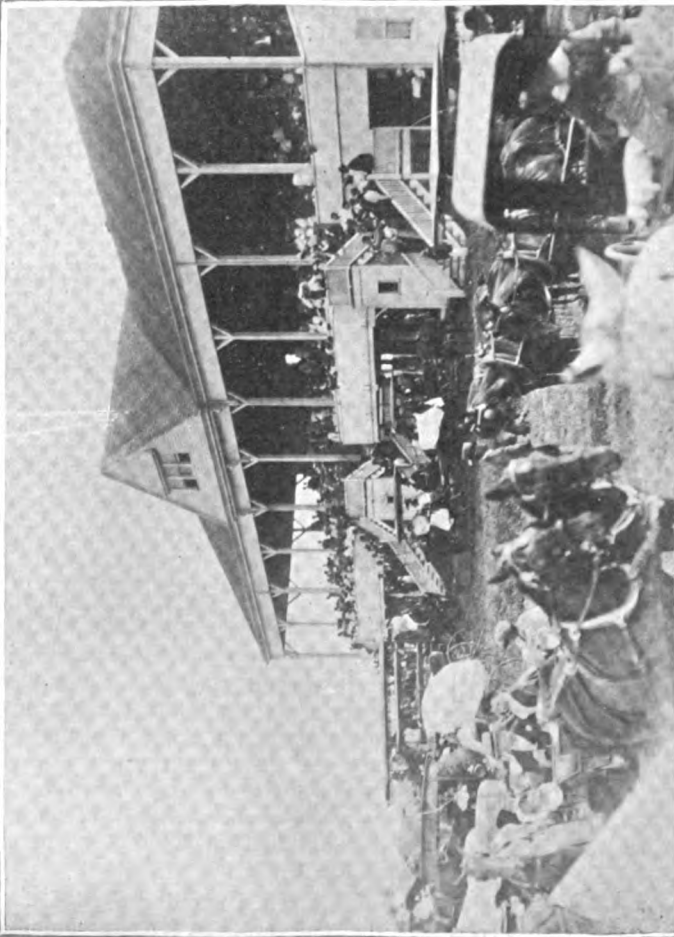
At Spring Lake on Friday the automobile events were a part of a week-long programme of various sports, previous days having been devoted to horse racing, golf tournaments, etc. To run the races the corps of officials who had been acting at Long Branch were called upon, and many of the summer visitors at "the Branch" went down to Spring Lake for the day.

An automobile parade preceded the races on the boulevard, and forty machines partici-

START OF JOE TRACY AND T. MCARTY, SPRING LAKE.

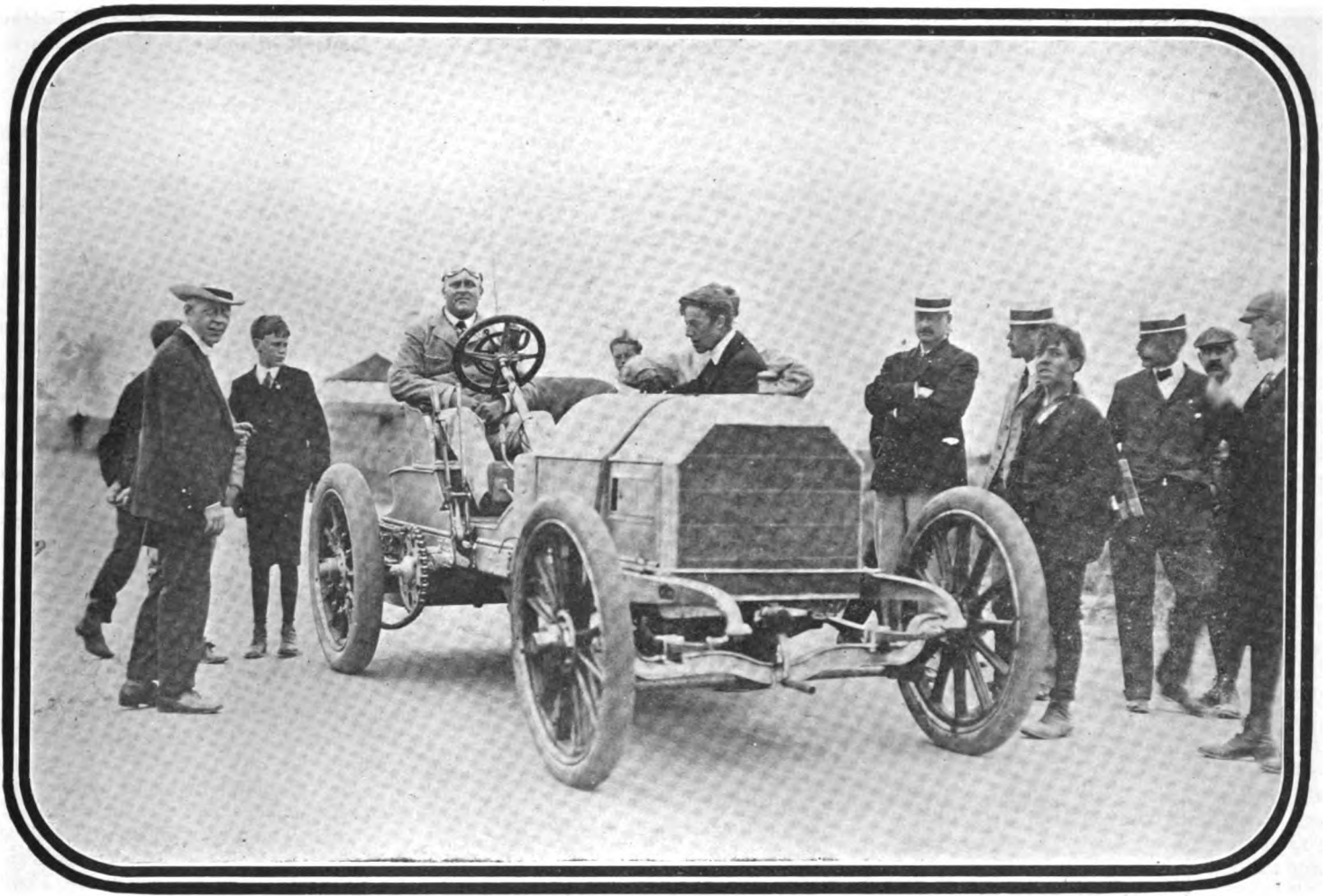


THE GRANDSTAND, ELKWOOD TRACK.



COOLING OF THE HARKNESS MACHINE AFTER ITS RECORD RUN.

TAKING ON PASSENGER IN "PICK-UP" RACE AT ELKWOOD PARK.



B. M. SHANLEY IN THE VANDERBILT 39 SECONDS MERCEDES.

pated, all except a few of which were handsomely decorated. The parade covered five miles, and then the cars lined up in front of the New Monmouth for judging.

L. E. Wells, of New York, whose Winton was decorated with red gladioli and hydrangeas, captured the first prize. The occupants of the tonneau were Miss Elizabeth Wells and Margery York, of New York, and Miss May Breeze, of Trenton. They were attired in white gowns and carried parasols made of flowers. In front of the automobile, over the motor, sat a small boy attired as Satan.

Colonel James M. Schoonmaker, vice-president of the Pittsburgh & Lake Erie Railroad, of Pittsburgh, won the second prize. His Packard was decorated with greens, and in front, suspended on a large pole, was a huge butterfly. From this lines extended into the car and were held by Mr. Schoonmaker's youngest daughter, Miss Freta. She was surrounded by six little friends, who in their white dresses formed a pretty picture. They were Natalie Hulshizer, Mary Snyder, Rachel Chantler, Nina Blair, Evelyn Walker and Violet Stockton.

Miss Ryker, of New York, in a runabout decorated with white asters and accompanied by a friend, both attired in white, won the plaudits from all the large crowd of spectators and carried off first prize in this class.

Mrs. Zacharias, of Asbury Park, with an

automobile decorated with pink and white gladioli; Mrs. Samuel Highlander and Dr. W. G. Shaulffer, of New York, were other prize winners. Others whose automobiles were noticeable in the parade were Charles L. Taylor, Loren R. Johnson, Mrs. C. E. Henry Stengle, J. H. Blackwell, Albert Marburg, William A. Marburg and Harrington Sickles.

The races on the boulevard in the afternoon were over a half mile course, and the timing was done with A. L. McMurtry's electrical apparatus, while Chairman A. R. Parlington of the American Automobile Association was referee. The wires of the timing apparatus had to be laid along the roadside, unfortunately, and, as there was no curbstone, wagons ran over them several times, cutting the insulation, and causing troubles of various sorts.

To the relief of every one, and somewhat to their astonishment, there was no accident, although the course was hardly policed at all, and the big Mercedes racers of B. M. Shanley, jr., and E. R. Thomas kept running over the road in practice at top speed for half an hour before the races began. The great contest of the day was expected to be between these two cars, and there was some betting on the result. While all the other events were run off from a flying start, the officials decided to have the big fellows race from a standing start. This gave an ad-

vantage to the E. R. Thomas 60-horsepower car, driven by Edward Hawley, which could get under way quicker than the 90-horsepower Mercedes of Mr. Shanley, which is the 39-second car formerly owned by William K. Vanderbilt, jr. Mr. Shanley was driving his own car, and the Thomas car, with Hawley up, was the favorite in the betting. When the signal to start was given Hawley got away first, and Mr. Shanley, in throwing in his high speed, stripped the gears. The car ran several hundred yards before he could stop it, and then it was left at the side of the road to be towed home.

Some of the other races of the day were close enough to be quite interesting, several victories being won by a few yards only.

Summary:

Half-mile for cars costing from \$650 to \$1,000—Won by Charles S. Howard (Pope-Hartford); Harrington Sickles (Cadillac), second. No time taken. Won by 200 yards.

Half-mile, for cars costing from \$1,000 to \$2,500—First heat won by E. G. Davis (Franklin); F. W. Stockbridge (Franklin), second. Time, 1:00. Won by 50 yards. Second heat won by C. E. H. Stengle (White); E. V. Connett (Pheps), second. Time, 1:15. Won by 40 yards. Final heat won by E. G. Davis; C. E. H. Stengle, second. Time, 1:00. Won by 50 yards.

Half-mile, for cars costing from \$2,500 to

\$5,000—First heat won by Joseph Tracy (Royal); Thomas McCarty (Winton), second. Time, 0:48. Won by 100 yards. Second heat won by R. H. Lounsberry (Worthington); E. V. Connett (Phelps), second. Time, 1:00. Won by 150 yards. Final heat won by Tracy; Lounsberry, second. Time, 1:00. Won by a length.

Half-mile free-for-all—Won by Edward Hawley (Mercedes). B. M. Shanley (Mercedes), started, but did not finish. Time, 0:42, from a standing start.

FLORAL PARADE, SATURDAY.

On Saturday the programme called for a grand floral parade to conclude the week's entertainment. It rained tremendously on Saturday morning, and most of those intending to participate countermanded their orders for flowers. At 11 o'clock the sun came out, and it was decided to hold the parade. Only between thirty and forty cars participated, and about one-fourth of them were decorated. The parade moved between Monmouth Beach and Elberon. The streets and avenues were lined with spectators. The line formed in front of the West End Hotel at 3 o'clock. The Long Branch military band led the procession. They occupied seats in a big automobile. The decorations, particularly through the business sections, were quite elaborate.

On their return to West End silver cups were awarded. Mr. and Mrs. C. C. Miller, of Long Branch, formerly of Pittsburg, Pa., made the best showing. They had four decorated machines in line. W. E. Scarritt, president of the Automobile Club of America, rode in a car in front of the band. The parade awards were as follows:

Best decorated car—Mrs. C. C. Miller, Long Branch (Studebaker-Stanhope).

Most grotesque car—Mr. C. C. Miller, Long Branch (Mercedes).

Most original car—Mr. F. A. Hearn, New York (Buffalo).

Best decorated car driven by woman—Mrs. R. A. Newton, New York (Autocar).

Best decorated car carrying four passengers—Mr. H. A. Smith, New York (S. & M. Simplex).

Decorated car carrying largest number of women—Mr. G. A. Smith, of New York (Packard, carrying eight women).

After the awards for the parade were made President Scarritt presented Sidney Bowman with a silver cup. Mr. Bowman's Clement Bayard, which started on Monday morning of last week to make a 3,000-mile non-stop run, quit on Saturday morning at 3:14 o'clock, after covering 2,050 miles. It was planned to have the car run further, but the motor stopped. No record was made, as the motor of the car stopped on Friday when the engine was suddenly reversed to avoid running into a little girl. The route of the car, chosen for this advertising scheme, was from West End to Spring Lake and back, over twelve and a half miles of as fine, smooth roadway as could be desired for a baby carriage. F. E. Muscovics and a couple of as-

sistants were in charge of the car, and observers were carried all the time. This attempt at a non-stop run over sandpaper roads was not sanctioned by any one, and it was inaugurated with wild, dishonest shouts to the effect that the La Roche performance, which really was sanctioned, had not been, and this true American and world's record would be ignored and an effort made to beat the English record of 2,017 miles. A great deal of misleading information concerning the affair was sent out to the newspapers, but the fact that the car stopped on Friday was not generally known, and the queer enterprise was ended by claiming and announcing that a new record had been made.

During the progress of the run Bowman, the agent for the car, and Nussbaum, one of the drivers of it, had a tussle in the early morning that disturbed the guests of the West End Hotel.

Nussbaum, the chauffeur, was tired out and was sleeping peacefully. Bowman tried to wake him by knocking on his shutters, and, getting impatient, smashed the blinds with his fist. Nussbaum, thus awakened, gave three loud yells, and, rushing for Bowman, grappled with him and threw him to the floor.

The two struggled furiously, and soon the entire house was in an uproar. Policemen with nightsticks and revolvers rushed into the hotel, and further startled the guests, who by this time thought there was a regular hold-up going on. Finally Nussbaum waked up enough to recognize Bowman, answered his questions, and the guests went back to sleep.

The patrons and reception committee of the Long Branch festival were:

The Hon. Rufus Blodgett, Nathaniel Huggins, Peter McDonald, Jacob King, Walter E. Hildreth, D. Pick, Colonel M. J. O'Brien, J. Lyons, Colonel R. C. Clowry, Leroy W. Baldwin, George H. Fearons, the Hon. Edward Murphy, Jr., Anthony N. Brady, C. C. Miller, Frederick Lewisohn, Walter Lewisohn, Harry Content, Jefferson Seligman, Colonel J. T. O'Donoghue, W. T. Burke, D. W. Wardell, Edward Wasserman, C. C. Minzesheimer, Adolph Lewisohn, M. J. Budlong, W. D. Martin, Max Hertz, Frank B. Conover, the Hon. Frank Ten Broeck.

The officials were:

Referees—A. R. Pardington, chairman racing board, American Automobile Association; S. M. Butler, secretary American Club of America; S. A. Miles, manager National Association Automobile Manufacturers.

Judges—B. M. Shanley, New Jersey Automobile and Motor Club; William Wallace, Boston, Mass.; Winthrop E. Scarritt, president Automobile Club of America; E. T. Birdsall, New York.

Starter—Arthur A. Zimmerman, Point Pleasant, N. J.

Clerk of Course—Edward Cannon Bald, Buffalo, N. Y.

Timer—A. L. McMurtry, who employed the McMurtry electric timing clock.

Assistant timers—C. Dieges, A. G. Batchelder, Louis R. Smith and Edward Wasserman.

Change in "Salt Water" Celebration.

For years "salt water day" on the New Jersey coast has been famous, when, for the single time in a year, all the farmers of the inland districts take their families and drive to the seashore for a day of bathing in the ocean and picnicing on the sands. The antiquities of dress and conveyance have usually been the most picturesque feature of the occasion. The general run of vehicles on this day has been made up of sturdy, springless farm wagons and rickety chaises or buggies. This year, however, the day brought a revelation. The farmers have been prosperous of late, and among the turnouts on "salt water day," 1904, were a number of automobiles.

This year the celebration fell on August 13, and on that day rural New Jersey sought the shore for its annual dip in salt water. The old and the new travelled side by side. There was the old fashioned farmer, the proverbial horny handed son of toil, beside the new, scientific agriculturist, whose work is done by machinery and other men's hands. There was the carryall drawn by plodding plough horses beside, or as near as the nags would permit, the puffing automobile, and there was the bathing suit of other years—overalls and old shirts for "paw" and the boys, and wrappers for "maw" and the girls—besides highfalutin' ones patterned after the fancy ones created for French watering places. Enough of the old was left, however, to remind the oldest inhabitant of his youth, especially the dog paddle swimming stroke that he had learned in a millpond and the pumpkin pie like that his grandmother used to make.

The old style farmer as well as his horses looked askance at the new fangled conveyances, and he patted faithful old Bill and Jess on the neck as he thought how certain they were never to blow up miles from home or break down in the mud or to run over dogs in the road, or scatter the feathers of staid and matronly hens to the four winds of the earth. Then, too, envious glances were cast by the younger folk who had to travel behind Bill and Jess, but who wished "paw" would not be so stingy but would buy an automobile.

Long Beach, one of California's watering resorts, is very careful of its asphalt pavements. To further protect them it has decreed that "no horse, vehicle, automobile or motorcycle shall remain standing for more than fifteen minutes" on any street so paved. It is explained that the provision was made necessary by "the rotting of the pavements, due to oil drippings from the machines."

The Milwaukee Automobile Club has been successful in drawing up and having approved the ordinance that will be satisfactory to them. It compels the registration of machines, but fixes the speed limit at twelve miles an hour in the city.

The Globe-Girdling Giddens Go West on Rails.



MR. AND MRS. CHARLES J. GLIDDEN.

Mr. and Mrs. Charles J. Glidden, who started from Boston with the New England contingent of the St. Louis tour, are now off on their three years' tour of the world, of which the run to St. Louis was only a first step.

These famous tourists left St. Louis this week and journeyed to Minneapolis, where they arranged to stop until Saturday. Then will begin a remarkable part of their travels. The steel wheels, which Mr. Glidden had made for his automobile, so that it might be driven on railroad tracks, will be called into use for the first time going west from Minneapolis.

Mr. Glidden had no trouble in getting permission to travel on the railroad tracks with his automobile. In fact, three transcontinental railroads offered him the use of their rails for his ride to the Pacific on condition that he followed train orders and carried a conductor and an engine driver so as to comply with the rules. To this he consented. He originally selected a route via Texas to California, but later changed it to the northern route via the Canadian line. West of Winnipeg he will cross the great Canadian prairies and will enter the Rocky Mountains via Kick-

ing Horse Pass. The total distance of the rail route will be upward of two thousand miles.

Besides Mr. Glidden and the railroad employes with him, there will be on the trip Mrs. Glidden and Charles Thomas, the English chauffeur, who has ridden with Mr. Glidden in his seventeen thousand miles of world touring. The Napier will be driven only during the day, and will be run off on sidings at nightfall to enable the passengers to rest in hotels. Where possible stops will be made en route for meals.

From Vancouver Mr. and Mrs. Glidden and their automobile will sail for the Orient to continue their touring.

Four Big Entries for Glidden Cup.

During the stop in St. Louis at the conclusion of the long tour, an informal meeting of officers of the American association was held at the Hotel Jefferson to consider the conditions under which the Glidden \$2,000 touring cup should be competed for. A committee, consisting of President Harlan W. Whipple, of the American Automobile Association; Augustus Post, chairman of the touring committee, and James L. Breese, a governor of the Automobile Club of America, was appointed to formulate the rules and regulations governing the contest for next

year and to submit the same to the general committee.

W. C. Temple, of Pittsburg, immediately made an entry for next year's contest, depositing \$100 entrance fee. This was followed by entries from President Harlan W. Whipple, James L. Breese, of New York, and R. P. Scott, of Baltimore.

The cup is to be competed for annually in tours of not more than one thousand miles nor less than five hundred miles weekly, over public highways. The owners of competing cars must be passengers in their vehicles.

The contests for the next three years must take place either in the United States or Canada, or both. The rules of the contest are yet to be fixed, but it is understood that they will take into consideration the number of miles travelled in season, average running time, condition of machines at the close of the contest, full consumption and cost of operation.

Great is Daniel McLean, of Milwaukee. In the time of peace he has prepared for the worst by fixing his automobile for the time when it shall not be a horseless vehicle. He has had a pair of shafts fitted to his motor car, so that in case of a breakdown he need not be towed home at a rope's end, but can hitch up a horse solidly. The shafts ordinarily are concealed beneath the car.

To Facilitate Sewer Inspection

Compelled to make a tour of the sewer system and the streets of Brooklyn to acquaint himself thoroughly with the conditions, Public Works Commissioner Brackenridge believed until a few days ago that he was condemned to cover eight hundred miles on foot and by trolley car. Then his sentence was commuted to riding in an automobile. He had covered about thirty miles of his long tour when a motor car sent for his use overtook him in East New York. The machine cost the city \$2,500.

Commissioner Brackenridge and Borough President Littleton will have the use of the car for "city business only," as the statement goes, but there is no law against making use of it for private purposes. Brooklyn had an automobile in the administration of President Swanstrom, but it behaved so badly with him that Swanstrom declined to trust himself to it and willed it to Public Works Commissioner Redfield. Redfield was pleased with it until the thing ran away with him. Then the machine was sold, and Brooklyn had none until President Littleton asked for the one which was delivered to Commissioner Brackenridge, who put it to use at once and will continue his eight hundred mile tour without fear of becoming foot-sore.

Routed the Hold-Up Men.

Two grim looking revolvers pointed at him with a command to "Halt!" by two hold-up men at Central avenue and Sheridan Road, Chicago, one recent dark night, did not make much of an impression on Alderman William B. Walrath, who was returning to Chicago from Wilmette in his automobile.

The alderman threw on his full speed and crashed into the two men, knocking one down and running over the other.

Arriving at Evanston, Alderman Walrath notified the police, and, accompanied by Captain Mersch and Officer Benjamin Siegel, he returned at speed, expecting to find one of the hold-up men lying in the road badly injured, as the heavy machine had run completely over him.

But no trace of the man was to be found, and the police believe that the uninjured man either assisted or carried his comrade from the scene.

Ruling on Accident Insurance.

Automobilists who speed endanger their insurance eligibility, particularly in the accident department. Old companies are warning their agents of the necessity of taking into consideration the moral hazard in placing insurance on the owners of automobiles. The Travellers' Insurance Co. says it is "willing to insure against the normal exposure resulting from the use of automobiles by responsible men, but all cases presenting an unusual or extraordinary risk, whether from inexperience, recklessness, bravado, imprudence or unsteady nerves, must be strictly excluded."

Motor Cars Affect Railway Earnings.

The progress of the motor car and the motor wagon was one of the many reasons given by Lord Claud Hamilton at the recent annual meeting of England's Great Eastern Railway Company for the indifferent nature of the half year's results.

The figures for merchandise traffic showed a decrease, and the chairman said there had been an increase in motor cars and motor traction generally for goods carrying, which had affected the company prejudicially.

Despite this, however, the company has itself gone over to the enemy in some respects. Lord Claud Hamilton stated subsequently that a service of motor cars has been started between Lowestoft and Southwold. It was well patronized, he said, and it was giving satisfaction to the public.

The increased use of motor cars was also referred to at the meeting of the London, Brighton and South Coast Railway Company.

The displacement of horse drawn vehicles by motor cars has, however, affected the company in a peculiar way. In the past wealthy people going out of town have sent their carriages and horses on before them by railway. Now, however, motor cars have taken the place of the carriages, and it is found more convenient to send these on by road in charge of the chauffeur.

Receipts for the carriage of horses and carriages have therefore fallen off. In addition to this loss there has also been a slight loss on the parcels traffic, due to the use of motor vans.

Gave the G. A. R. a Taste of Speed.

More than two hundred automobiles were placed at the disposal of the G. A. R. veterans for use during their reunion in Boston recently. The veterans were taken for a ride out to Concord to see the sights of interest there and along the way. They didn't see anything along the way. The landscape went past too fast and was screened in dust clouds. It seems that the police had been admonished to keep their stop watches in their pockets and not to interfere with the entertainment of the veterans. The chauffeurs knew this, and knew they had an unprecedented opportunity for record making along that route, so they "opened 'em up."

Robber with Red Lantern.

An automobilist who drove into Newburgh, N. Y., last Friday night, from Tuxedo, said that an attempt had been made to hold him up on the road, according to "The Newburgh Journal." The alleged highwaymen stood in the middle of the road and stopped the machine with a red lantern. When the motorist was ordered out of his machine he put on steam and bore down on the knights of the road and the footpads scattered.

There are 2,150 automobiles registered with the Connecticut Secretary of State. Of these Hartford, with a population of 90,000, claims 500, or nearly one-fifth of the whole. On the other hand, New Haven, with a population of 125,000, has less than 300 motorists.

Reviving New York Bus Scheme.

Again the 'bus scheme of the Manhattan Transit Company, which was chartered several years ago by the New York Legislature to carry passengers in automobiles about New York City, is promised to be put into operation.

This time the plan is to use electric 'busses and not to attempt to handle all the traffic of the metropolis. The company says it shortly will begin to do business in conjunction with the subway and elevated roads. The idea is to take care of passengers in the side streets of New York and hurry them to the nearest station.

Inasmuch as it is unfeasible to get surface transportation in many of the districts of lower New York, it is believed electric 'buses will be eagerly hailed. By dividing the city into districts, and allowing a 'bus to make regular trips, the officers of the Manhattan Transit Company feel that the public will become regular patrons.

A system is also being devised to reach the parks and outlying districts remote from surface, subway or elevated lines.

More Cars; Fewer Accidents.

Accidents decrease progressively as the number of automobiles in use increases, according to a long and very practical article in the "Paris Figaro."

In 1889 there were 1,672 registered automobiles in Paris, and the number of accidents to persons was 1,534, or nearly one accident for each machine.

Last year there were 9,207 automobiles registered and licensed in Paris, and the accidents to persons, as recorded in the official list, was 1,352, nearly 200 less than five years before, when there were hardly more than one-sixth as many machines on the highways.

What Registration Records Show.

The records in the automobile license department of the New Jersey Secretary of State's office show that 6,997 machines have been licensed under the automobile law of the State. Fully 90 per cent of the licenses of 1904 are for touring cars. Last year the runabouts were 72 per cent of the whole number licensed; this year there has been so great a gain in the percentage of touring cars licensed that when a license for running a runabout is applied for the automobile license clerk remarks about its infrequency.

Governor Makes His Choice.

Governor La Follette, of Wisconsin, whose fight for re-election has aroused great interest, which has been heightened by his announced determination to use an automobile on his stumping tour, has finally made his choice of a car; it is a Winton, the order for which was placed with the Bates-Odenbrett Co., Milwaukee.

It is said that the gradients of the Japanese roads are exceedingly stiff. One in four, and even one in three in places, are the hills which are likely to be encountered.

EFFECTS OF COMPRESSION

Its Relation to Horsepower Explained and Some Wrong Impressions Corrected.

To the average intending purchaser of a motor car not the least perplexing feature is the apparently weird and wonderful method of calculating or estimating the horsepower of various cars, says an authority on the subject. Thus, in one case a four-cylinder car of 20 horsepower may appear distinctly less powerful than another make of two-cylinder car of 16 horsepower; or, even taking equal number of cylinders, the claimed power bears no sort of relation to the size or general bulk of the machinery.

A good many things go together to make up the actual power of any engine. First there is the ratio of bore and stroke, then the degree of compression, next the weight of flywheels in relation to stroke and bore, then there is the method of cooling, whether by air radiation or water jacketing. Of the items named as affecting the size and outer appearance of engines in relation to actual power, nothing counts for so much as the degree of compression, and, speaking generally, high compression engines give greatest power for least bulk, but it is to be noted that compression cannot be carried beyond a certain point, which is variable according to the remaining specification, or trouble will arise from premature ignition. With high compression, although more difficult of ignition by a weak spark, the mixture of gas and air does not call for such nicety of regulation, and a poor quality mixture, which would be entirely useless at low compression, will exhibit the best characteristics on extreme high compression. The range of compression in different engines may vary from as little as 45 pounds to as much as 100 pounds, yet either engine may be equally efficient in respect to power produced from fuel consumed.

We are all well aware that through the entire range of mechanical power application we may obtain speed at the expense of power, or vice versa, and the gasoline motor is no exception.

It is obvious that in a motor in which the bore exceeds the stroke, such a motor will be of the high speed variety, but to secure this it need not necessarily be planned for high compression.

The high compression unquestionably makes for speed on the level, but a moderate compression gives a more powerful pull on hill work, and causes less trouble through overheating; it likewise admits of lighter flywheels.

Of course, where the problem is to get the greatest power out of a given cylinder of small size, high compression must be resorted to, and the flywheels must be sufficiently heavy to overcome the big resistance on the compression stroke.

This argument, however, has nothing what-

ever to do with faulty compression, for this is an entirely different matter. Each engine is designed for a certain compression ratio, its bore, stroke, flywheels, etc., all being planned for that particular compression, so that whether the planned compression be high or low, it is necessary that it should be maintained if the engine is to give its best power results. A good many people get quite adrift on this matter, and imagine that a low compression engine is necessarily inefficient, and also fail to distinguish the difference between the low compression due to leakage in a high compression design from the designed low compression, in which there is no loss by leakage.

This argument is easily followed if we trace what takes place in any four-cycle internal combustion engine.

The motor draws in a certain quantity of explosive mixture, the valves close, the piston proceeds to compress, then the charge is fired; the mixture in the cylinder contains a certain heat energy, and it must not be forgotten that the gas motor is a heat engine purely, and that the power driving the piston is the high temperature of the gases on combustion. At this stage, it may be well to clear up any false impressions which may have been formed as to loss of compression in a high pressure engine coming to the same thing as the same resulting pressure in all engines designed for low pressure. In the case of the high compression motor the space in which the charge of gas is to be compressed is very small in relation to the area swept by the piston, and on explosion the piston is, as it were, struck a violent blow, but, the charge being small in compass, fails to follow the piston throughout its stroke, i. e., we get extremely high pressure at the moment of explosion with extremely rapid fall as the piston descends. With a designed low compression, the space is larger, and contains a larger body of gas, which takes a perceptibly longer time to ignite or to complete combustion, so that the pressure on the piston is continued through a greater portion of the stroke, so that it may be that under certain favorable conditions of low compression design, a greater proportion of heat value is extracted by the motor and given off as useful power at the crank shaft. It is not argued that all engines are correctly designed in the matter of compression in relation to other features in the design, but so far as the user is concerned the best he can do is to maintain the designed degree of compression, and it is at least certain that whether the design be good or bad, compression high or low, any fall from normal compression, such as would be caused by leaky valves or piston rings, would have a far greater influence on the power of the motor than a slight error in original design.

Fred P. Neumeister, of Rockford, Ill., is a carriage dealer who has been watching the direction of the wind. As a result he is selling out his stock of carriages and will replace them with automobiles.

EVERY MAN HIS OWN ACCUSER

Chicago Testing a Device that Whistles for Police When Speed Limit is Exceeded.

Chicago officials are busy with a new invention designed to check automobile scorching. It is a device that after being attached to a car and set at the legal rate of speed—say, ten miles an hour—will “put up an awful holler” on its own account if that rate of speed is exceeded. The device is connected with the running gear of the car, and as soon as the legal speed limit is exceeded a whistle blows loudly, so as to attract the attention of the police, and every one else, to the fact that the law is being violated.

Mayor Harrison, City Electrician Ellicott and Alderman Rice, of Chicago, and the inventor of the affair, W. M. Thomas, of Austin, have been experimenting with it to see if it would do as an instrument that automobilists might be compelled to carry. It worked all right so far as shrieking went, but it was found that any chauffeur could readily disconnect the mechanism so that it would not whistle. City Electrician Ellicott said he thought this could be remedied.

One can imagine the automobilists of Chicago, after having successfully disputed the constitutionality of the registration law, just clamoring to buy these devices and attach them to their cars.

The inventor does not explain how, after the attachment has been set to howl at anything over the legal rate allowed in the city, and fixed so that it cannot be tampered with, a man could drive his car in the country without having the clever mechanical whistle playing constantly like a steam calliope.

Alderman Rice is said to be very much interested in having the device adopted, and probably would be quick to introduce the necessary ordinance making its use compulsory. Some aldermen are quick to scent a good thing!

Tests of Tire Effects.

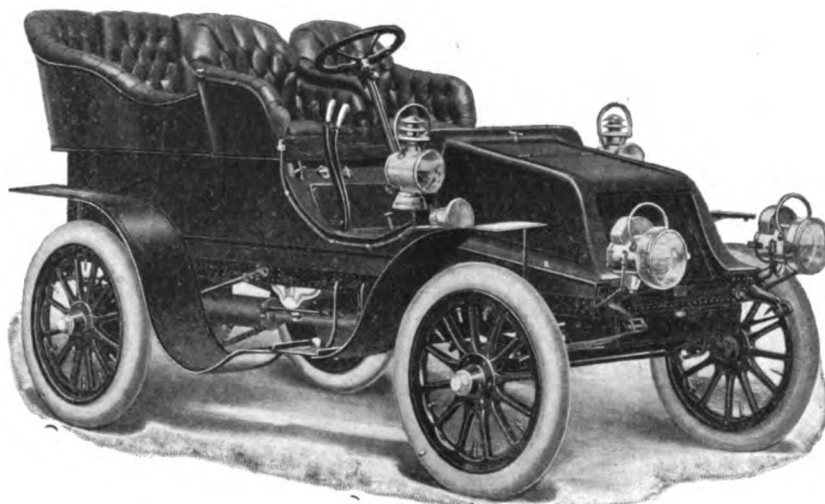
A series of tests has been held in France, dating from May, with regard to differences of wheel resistances of automobiles according to whether the rims are fitted with solid or pneumatic tires or plain or non-slipping treads.

It has been determined that if the thickness of the tread of a plain pneumatic tire is increased too much the tire becomes less elastic than tires fitted with non-slipping devices.

The latter have the added advantage of being practically insured against cuts and tearing.

Another point established is that at speeds of ten and twenty kilometres an hour the difference between the respective styles of tires is not great.

WINTON



MOST REPAIR BILLS

are the result of frail construction or faulty workmanship. Slipshod manufacture may not be noticed when you buy a car, but it is certain to cost you annoyance and expense in service.

Avoid repair bills by purchasing a 1904 WINTON Touring Car. Never was a car more sturdily constructed, or more reliable and satisfactory in constant use. Hundreds in daily service of every conceivable character, and wherever you find a WINTON you find a delighted owner.

\$2500 completely equipped; \$2300 without top;
f. o. b. Cleveland.

PROMPT DELIVERY.

AGENCIES EVERYWHERE.



THE WINTON MOTOR CARRIAGE CO.

Member A. L. A. M.

CLEVELAND, O., U. S. A.

New York, Boston, Philadelphia, Chicago, London.

EAMES ON MOTOR WAGONS

Their Superiority Over Horse-Drawn Vehicles Already Proven, he Says—His Facts and Figures.

"The advancement of the business automobile has suffered not a little from the irrational expectation that for each particular power there is an established definite and invariable expense account," says Hayden Eames, of Cleveland, Ohio, the agent for the Federal, Westinghouse and other well known companies, in dealing more particularly with electric vehicles.

"As a matter of fact, the expense of operation of a power automobile could be expected to vary according to circumstances between very wide limits," he contends, and adds:

"Perfection in automobiles is no more to be expected than perfection in horse service, and I could scarcely believe any one could dissent to the statement that when more money can be made or saved with the power wagon than with any existing means of transportation the supremacy of the former has been established. Whatever improvements the future may bring forth, the power truck and wagon of reliable manufacture have already been demonstrated to be commercially much superior to the horse, and therefore it is time that those at common interest in the advancement of the art should express themselves on this division of the business in a manner characteristic of a work successfully accomplished.

"The cost of operating electric business wagons differs very much with the service to be performed," he continues. "A positive statement of the cost of operation of electric vehicles to cover all kinds of care and service is no more possible than in the case of the horse wagon. Light electric vehicles in easy service have been and are being operated with pneumatic tires at a cost of less than \$10 per month, not including driver. On the other hand, the express service in a city like Pittsburg is the most severe and costs much more. It is senseless to compare the cost of operating one horse drawn wagon with one electric or other power wagon limited to the same service. The operation of the one power wagon sometimes costs less than the one horse drawn wagon, but it generally costs more. In small numbers the operation of one trolley car is many times more costly than the operation of one horse car; the cost of a trolley car system is, however, a much smaller part of the receipts than in the case of horse cars, and, after all, that is the object. There is hardly a case of horse drawn wagon, however, where some form of power wagon will not be a better money maker and saver.

"It is a common and foolish mistake to

limit the schedule and operation of power wagons to the exact schedule and routes of horse drawn wagons. The business you have should be rearranged to meet the best requirements of the power vehicle so it can be operated in its most economical manner to accomplish the service you want. Railroads would not be popular if they were run on stage coach schedules.

"A 'professor,' or highly educated electrician, is no more likely to be able to care for an automobile than a zoologist is to care for a horse. What is required in each case is experience and personal familiarity with the 'job.' A high education is not required for a battery caretaker. One experienced electric wagon man, with 'laboring help,' can take care of a hundred wagons as easily as one wagon, if station is properly fitted up. The cost of stable and equipment for a large electric delivery plant is about one-quarter the cost of a horse stable to do the same express service. The 'stable charges' are reduced in about the same proportion. Any man of common sense and painstaking can quickly learn to take care of storage batteries. But if you have him 'practice' on the first wagon you buy your experiment will be costly and you will be deceived. You had better send your man somewhere to learn how first, or else hire somebody who already knows.

"In considering this subject don't overlook earning power. In comparing two kinds of transportation it might be found that the cost per 'ton mile' was the same in each case; but if one moves twice as many ton miles a year as the other we would not hesitate long in our choice if we have the ton miles of business to do or think we can get it. This is true with investment charges deducted, for if one earns, say, 20 per cent on the investment and the other 10 per cent, and we charge 6 per cent in each case, we are 14 per cent to the good in one case and only 4 per cent in the other.

"Where electricians will do the work at all, they are usually the cheapest of all powers, especially in large stations; but where they will not some other form of power wagon will. Nothing is so dear as horse transportation. Transfer and trucking companies frequently overlook horse renewals in their expense accounts, or work on an arbitrary depreciation which is not equal to the number of horses averaged per vehicle year in and year out.

"No one who has habitually used an electric brougham or other closed vehicle ever wants to go back to horses. It is a question of convenience and economy, not sentiment. Those that enjoy the horse for his own sake will keep on doing so. Outside of the race-track he is as poor a money maker on the road as he turned out to be on the rails in comparison with modern methods."

Mr. Eames has compiled and presented in attractive form some interesting and valuable data bearing on the subject of the cost of operating electric business wagons. The figures are on the basis of adequately pow-

ered (these words are underscored) wagons in service as severe as express service in, say, Pittsburg. Perfect attendance is not assumed, but only such as can readily be obtained under present conditions. Seventy-five per cent of the service required of business wagons can be done very much cheaper than here given. The figures include: Interest on investment at 6 per cent; extra trays of battery to facilitate cleaning without interruption of service; depreciation of various items according to already established experience; battery renewals under severe conditions but good care and prompt renewal when required, and assume the use of over-voltage circuit breakers or other guarantee against overcharging; three hundred and fifty full charges a year under fairly unecological conditions and with purchased current at four cents per kilowatt hour.

As to charging current, while the price is about what is usually charged, the number of charges a year is excessive and is intended to take care of all current used for whatsoever purpose in connection with the matter. Some of the vehicles in most kinds of service would not require more than two hundred charges a year. It depends upon what they are doing.

Mr. Eames's figures follow:

Light wagon such as used by laundries and small shops. Could carry 1,200 pounds occasionally without permanent injury, but ordinarily used for loads from 300 to 750 pounds. Solid rubber tires.

INVESTMENT.

Probable price of wagon.....	\$1,200.00
Extra half battery.....	113.00

Total investment\$1,313.00

Extra half battery only necessary where severe service is required.

EXPENSE.

Interest and depreciation.....	\$160.12
Tire repair and renewal.....	37.50
Mechanical and electrical repair.....	72.00
Charging current 350 times at 36c.....	126.00
Battery renewals and cleanings.....	134.99

Total per annum.....\$530.61

Making your own current with 27c. gas brings the charging item down to \$28 per annum, and the total becomes \$432.18.

In easy service, under the best conditions and with experienced care, these figures can be reduced to an annual expense of about \$100, which with above depreciation and interest makes \$260.12. All depends on nature of service and care.

This wagon should do at least the work of two horse wagons of the same capacity, and under some circumstances three.

Medium wagon. Could carry 2,500 pounds occasionally without permanent injury, but ordinarily used for loads of from 1,200 to 2,000 pounds. Iron, wood or solid rubber tires.

INVESTMENT.

Probable price of wagon.....	\$2,250.00
Extra half battery.....	\$114.58

Total investment\$2,364.58

Extra quarter battery only necessary where severe service is required.

EXPENSE.

Interest and depreciation.....	\$292.94
Tire repair and renewal.....	\$100.00
Mechanical and electrical repair.....	96.00
Charging current 350 times at 78.4c.....	274.40
Battery renewals and cleanings.....	262.00

Total per annum.....\$1,025.34

Making your own current from 27c. gas brings charging item down to \$60.17, and total becomes

\$811.11. With iron tires this becomes about \$726.11, or with wood tires \$736.11. In easy service, under the best conditions and with experienced care, these figures can be reduced to an annual expense of about \$350.00, which with above depreciation and interest makes \$642.00.

This wagon should do at least the work of two horse wagons of the same capacity, and under some circumstances three.

Express wagon. Could carry over 3,000 pounds occasionally without permanent injury, but ordinarily used for loads from 1,800 to 2,500 pounds. Iron or wood tires. Solid rubber can also be used if desired.

INVESTMENT.

Probable price of wagon.....\$2,500.00
Extra quarter battery..... 136.28

Total investment.....\$2,636.28
Extra quarter battery only necessary when severe service is required.

EXPENSE.

Interest and depreciation..... \$315.58
Rubber tire repair and renewal..... 190.00
Mechanical and electrical repairs..... 108.00
Charging current 350 times at 94c..... 329.28
Battery renewals and cleanings..... 311.80

Total per annum.....\$1,254.66
Making your own current with 27c. gas brings charging item down to \$673.28, and total becomes \$988.66. With wood tires this becomes about \$847.86, and with iron tires \$822.86.

In fairly easy service, under the best conditions and with experienced care, these figures can be reduced to an annual expense of about \$405.00, which with above depreciation and interest makes \$720.58.

This wagon should do at least the work of two horse wagons of the same capacity, and under some circumstances three.

Five-ton truck.

INVESTMENT.

Probable price with wood tires.....\$3,750.00
Extra quarter battery..... 191.62

Total investment.....\$3,941.62
Extra quarter battery only necessary when severe service is required.

EXPENSE.

Interest and depreciation..... \$513.24
Mechanical and electrical repair, including wood tire..... 120.00
Charging current 350 times at \$1.344..... 470.40
Battery renewals and cleanings..... 461.30

Total per annum.....\$1,564.94
Making your own current with 27c. gas brings charging item down to \$103.15, and total becomes \$1,197.69.

In easy service, under the best conditions and with experienced care, these figures can be reduced to an annual expense of about \$450.00, which with above depreciation and interest makes \$963.24.

This truck should at least do the work of two horse trucks of the same capacity, and under some circumstances somewhat more. Much depends upon the truck being managed with reference to its own limitations. It is too often handicapped by being compelled to work to the additional limitations of the horse.

Device to Prevent Explosions.

In a report to Washington United States Consul Halstead, Birmingham, England, calls attention to the Nonex, a device which, according to public tests made recently in London, renders all receptacles containing inflammable liquids comparatively secure from explosion. The device is an application of the principle of the Davy lamp, supplemented by a fusible cap or plug.

If a vessel of ordinary type, containing an explosive liquid, be subjected to sufficient outside heat, or if the contents be lighted at the orifice, the walls of the tank will burst by the force of the expansion. At an exhibition given by the owners of the patent, the Non-Explosive Device Company, a 20-gallon tank was partly filled with gasoline and placed upon a lighted bonfire. The fusible screw cap, made in two parts which were soldered together, soon blew out, the solder having melted, and the ascending vapor caught fire immediately; but no explosion followed because the orifice of the tank formed the upper end of a tube, which projected down inside the vessel to its bottom, where it was closed. To allow the oil or gas to percolate from the interior of the tank, each of the metal layers of which this tube was composed had been perforated, and, while the perforations would permit the spirit to be poured out, they prevented the passage of the burning gas to the interior by absorbing its heat as the wire gauze does in the Davy lamp. While the gasoline contained in the tube burned the flame did not extend to the liquid or accumulate vapor in the half-full tank, and, consequently, there was not sufficient expansive force generated to burst the tank. The flame was easily extinguished with a bundle of rags and then lighted and put out several times.

"The gasoline would, I judge, percolate constantly through the perforated layers of metal to the inside of the tube and there keep up a continuous burning," says Consul Halstead, "but, according to the accounts of tests which I have read, the flame does not appear to have been allowed to burn any length of time to see how long the metal layers of the tube could absorb the heat without becoming so hot that they would heat and dangerously expand the gasoline in the tank. A motor car tank to which the device was affixed was lighted with a match and

extinguished at will. A gasoline can without the device exploded almost instantaneously when lighted."

Peculiar Short Circuit.

It is often the simplest troubles about an automobile that are the most puzzling. Recently a certain motorist was telephoned to by a friend requesting his assistance.

He described the symptoms. The engine worked all right in a forward direction, and the same applied to reversing when he ran in a straight line. When, however, he reversed in a curve in order to get out of the garage, the engine promptly stopped. He had been several hours trying to locate the trouble.

The motorist's diagnosis was a short circuit in the wire between the magneto and the steering wheel switch. He immediately undid the clamp holding the wheel to the steering pillar, and, holding it clear of the metal, found that the engine ran all right under every circumstance. Close examination disclosed the fact that the insulation was worn in one spot, and when the wheel was turned abruptly the part of the wire which was exposed was brought into close contact with the steering pillar, and a "short" resulted.

Changing From High to Low.

Some motorists are not sure as to the best method of effecting a good speed change. There can be no definite laying down of the law on this point, as no one car is exactly the same as another in this respect, but it may safely be said that in reducing one's speed, i. e., in changing from a high gear to a lower, a better change is effected if the clutch is not completely withdrawn; just a gentle pressure on the pedal is all that is required. Care must be taken that the order of things is not reversed, as omitting to withdraw the clutch when changing from a low speed to a higher one will probably result in a broken gear.

How the Doctor's Car is Built!

Hurrah! Dr. Penniman, of Argyle, Ill., has a new automobile, according to the Rockford (Ill.) Star. "It is built similar to a victoria carriage, and the power is transmitted to the propellers by means of ropes to the rear wheels. The engine is under the front boards."

HORSES.				ELECTRIC.			
Investment.		Annual expense.		Investment.		Annual expense.	
3 Wagons at \$175...	\$525	Interest at 6 per cent.....	\$69.90	Total rolling stock.....	\$1,925	Interest at 6 per cent.....	\$115.50
		Wagons.				Batteries.	
		Depreciation at 10 per cent.....	\$52.50			Electric current, care and renewals of two sets of positives and one set of negatives per annum.....	400.00
4 Horses at \$160....	640	Repairs at \$35.....	105.00	1 1/4 batteries at \$500.....	625	Wagon.	
		Horses.		Wagon without battery.....	1,300	Depreciation of motors 5 per cent.....	15.00
		Depreciation at 20 per cent.....	\$128.00	Motors.....	300	Depreciation of remainder of wagon at 10 per cent.....	100.00
Total rolling stock.....	\$1,165	Feed, shoeing, care and stable expense at \$28.75 per month; \$345 per annum.....	1,380.00	Wagon and remainder of equipment.....	1,000	Mechanical repairs at \$9 per month.....	108.00
		Blankets, stable fixtures, harness at \$3 per month, \$36 per annum.....	144.00			Men.	
		Men.	\$1,652.00			One at \$60 per month.....	\$720.00
		Three at \$45 per month.....	1,590.00			One at \$45 per month.....	540.00
		Total.....	\$3,469.40			Total.....	\$1,998.50
Annual saving electric over horse wagon.....				\$1,470.90			

McMURTRY'S ELECTRIC TIMER

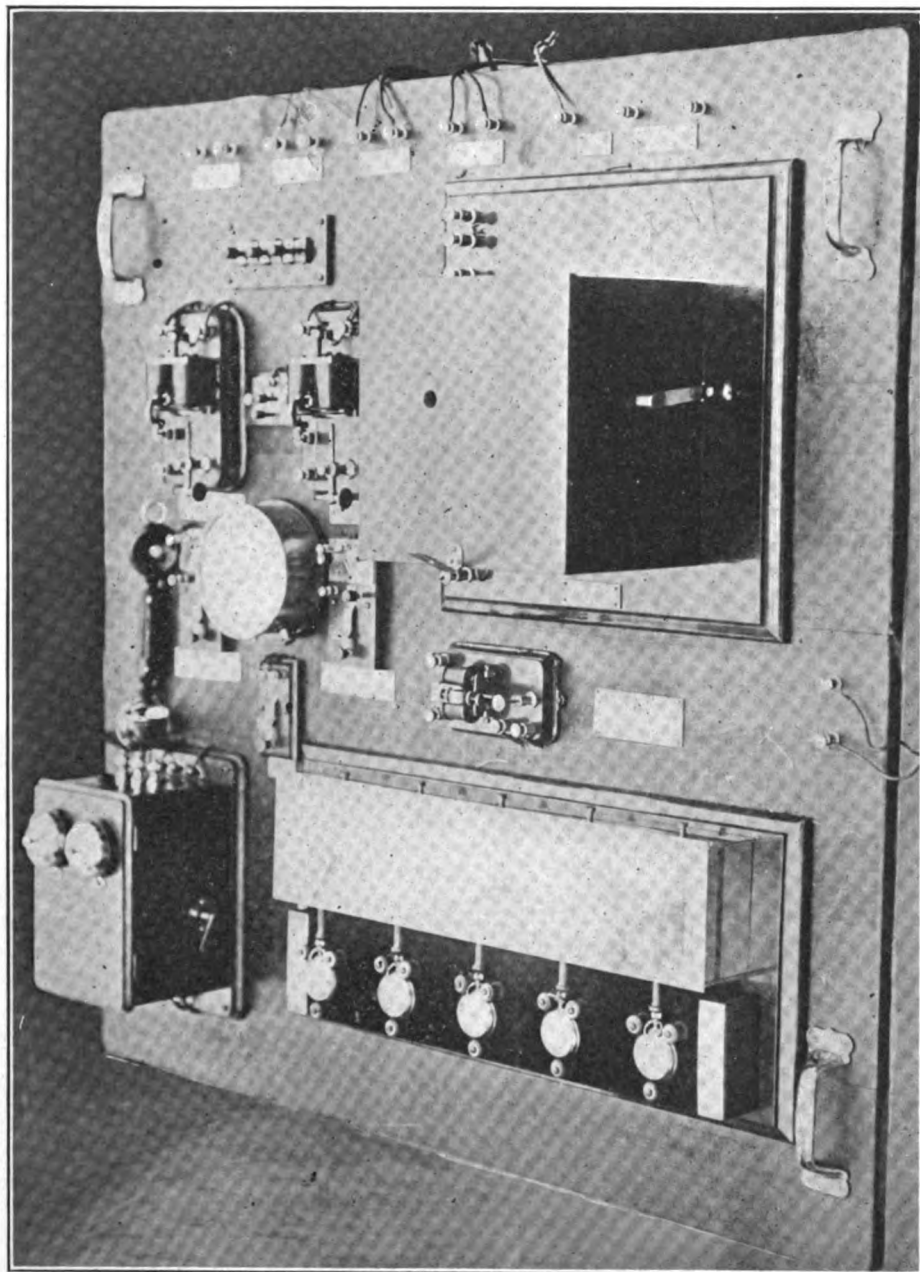
Incorporates Many Ingenious Features and May be Used to Suppress Scorching.

The McMurry electrical timing apparatus, which was used, practically for the first time, on the occasion of the Long Branch carnival last week, is an ingenious device that in many respects is a great improve-

tions, controls and successively stops the watches indicating the time of passing those points.

The device also comprises a system of portable telephones, which permit of conversation with any station, and also a telephone for the referee, who may talk with any station without being heard by any of the other stations.

The inventor of the instrument is Alden L. McMurry, of the Automobile Club of Amer-



ment on the foreign instruments hitherto employed.

In general terms, it may be said to consist of two electrical relays, one controlling a series of watches and the other the distributor which selects the watch to be stopped. Pressure of a key at the starting point rings a gong at the finishing station, and starts all the watches, of which ten may be employed, after which the distributor, by pressure of keys established at intermediate sta-

tion, who has been engaged in perfecting the details for many months. It has already attracted the notice of several men of means, and the formation of a company for its manufacture and exploitation is probable. The timing of speed contests of all kinds is not its only sphere of usefulness, as it is understood that at least two cities keen on the suppression of scorching are negotiating with McMurry for the purchase of instruments for use in timing and apprehending violators of the speed laws.

HOW ITALY REGULATES THEM

Mixture of Liberty and Illiberality—Drivers Must Carry Their Photographs.

Italy has had a new set of automobile regulations drawn up by a special commission appointed by the Minister of Public Works. Unlike the American State laws, these regulations apply equally in all provinces, and while they are exacting in some respects, there are no severe penalties provided and no nonsense about farmers being privileged to hold up motor cars by an uplifted hand and keep them held up. In the rural districts no speed limit is fixed. The rules were, in fact, drawn up as a part of a general enactment treating automobilists much the same as horsemen, as road users, the declared purpose being to "secure liberty of circulation and safety of transit."

The rules provide that each automobile must be visited and inspected by the civil authorities, when, if the result of the trial is satisfactory, a license will be issued by the prefect. The machine must be furnished with no less than two brakes, on different systems and of prompt and efficacious action; must carry at the back a shield of white enamel bearing in red the number indicating the province in which the license is issued, and in black the number of the license, and must be furnished with a loud sounding horn, any other warning signal being prohibited within closely inhabited districts, and permitted only on outlying roads.

Every automobile must carry at least two lamps in front, each with a white light reflector, and at the back another lamp, also with a white light, and placed at the side of the shield in such a manner as to illuminate it.

The conductor of every automobile must have completed his eighteenth year, and must possess a certificate of capability, issued by the prefect only upon proof of such capability. The certificate must be carried in a little book with a photograph and the signature of the holder.

The speed limit in inhabited districts is twelve kilometres an hour, and this may not be augmented except in the open country. No trial of speed may take place without the special authorization of the prefect.

For the use of automobiles, temporarily or permanently, in the public service, a special authorization must be obtained from the prefect of the province traversed by the route. The maximum weight of automobiles used exclusively in the public service, and having a fixed itinerary, is determined case by case in relation to the road used, by a competent officer of the "genio civile." For variable routes the maximum weight must not exceed thirty-five quintali per axle; the rims of the wheels, when not pneumatic, must have a breadth of not less than ten centimetres.

No automobile can be used in the public

service without special license, although possessing a private license and of identical type with those accepted for public use.

Any one intending to conduct a public automobile must provide himself with a special certificate of capability, though he already may hold a certificate for a private machine.

The time table of the course must be arranged in such a manner as not to require a velocity of over thirty kilometres an hour.

As to penalty for contravention, it is provided that to verify the fact of wrong the agent must demand a halt, and after having drawn up an official report he is to submit it within three days to the prefect, who at the end of eight days from the date of the report will notify the offender so that he may put in his defence. At the end of twenty days the prefect will submit the case to the proper authorities for judgment.

Whoever has his lights out at night, or who in inhabited districts makes use of any other warning signal than the one prescribed, will be liable to a fine of from two to ten lire; for other offences the fine is from ten to 100 lire.

Any driver who through negligence causes the death or grave injury of any person will have his certificate withdrawn.

Any driver who in the course of a year has had three collisions, though without injury to any person, will have his certificate suspended for six months.

Sixty days are given for the drivers and owners of automobiles to adjust themselves to the new conditions.

In driving any vehicle the rule is to be, "Keep to the right," except in passing from behind, when it is, "Turn to the left." In cities of over 25,000 inhabitants the municipal authorities may order that the rule of the road shall be reversed, if at the city gates a plainly visible notice to that effect is put up.

Motor Car for Signal Service.

A big Winton touring car, built especially for use in the United States Signal Service, is now being used as a moving telegraph station in manoeuvres near Atascadero, Cal.

The big wagon has an apartment for poles and one for wire, and, if need be, it can carry all the apparatus necessary for the laying of a telegraph line.

The machine was built according to plans of the War Department. When it was finished it was sent to Washington, and from there forwarded to the Department of California.

Burglars Up-to-Date.

The story of "The Motor Pirate," an English novel, was received as a rather extravagant piece of romance, but the idea of using an automobile for preying upon householders has been adopted by burglars who are persistently operating in the towns of Westchester County, just outside of New York City. Thus far the police have found only the tracks of their car wheels, which are lost on the general highway.

An ordinance has been introduced at St. Louis requiring chauffeurs to pass examinations and take out licenses.

TO SCHOOL IN MOTOR CARS

Brooklyn Academy Puts Eleven Into Service for Winter Time Transportation of Pupils.

The plan introduced by the Adelphi College, of Brooklyn, last year, of carrying some of its primary department pupils to and from school in electric motor vehicles, and which was reported in the Motor World at the time, was carried out to such advantage for several months last winter that it has been decided to increase its scope, so as to include the entire body of pupils. Instead of running two automobiles, as formerly, Adelphi College will operate at the beginning of the fall term six electric, heated opera buses, two large steam gasoline cars and three gasoline touring cars. The former will carry the pupils residing within a radius of one or two miles from the school, while the touring cars will bring them in from outlying districts.

The plan of Adelphi College, which is the first educational institution to use motor car transportation on so large a scale, has attracted considerable attention throughout the country, particularly in those cities where the transportation service is faulty. In speaking of its development from a small beginning, G. H. Turner, the secretary of Adelphi College, said:

"At the beginning of the last school year I was requested by the board of trustees of Adelphi to use my efforts to increase the attendance in the lower grades of the academy, especially the primary and kindergarten departments. I found on investigation that it was impossible for the youngest children, even with attendance, to board the trolley during the morning rush hours, on account of the crowded condition of the cars. I was asked to find some way of getting these little ones to school. The horse stage had been tried, but, in the severe weather, the first child to be called for had to wait too long in the cold vehicle before the others were all taken on and the trip to school begun. I began investigating and experimenting with the various types of automobiles, selecting finally our present electric opera bus.

"One of these machines collects a load of fifteen children in fifteen minutes and delivers them to the school in ten minutes more, making only twenty-five minutes for the first and ten for the last child to remain in the automobile, an average of seventeen and one-half minutes, which is quicker service than the trolleys from the same points, with the added advantages of perfect safety and privacy. I arranged at once for this service through a local transportation company. The first two automobiles ran from the beginning of the year through the snow and ice of an exceptionally severe winter without a break. Every child was delivered on time. Every subscriber knew by the time table the minute to expect the automobile and was ready in the vestibule of the residence when the automobile bell sounded. When

Adelphi opens next month we expect to have in commission for this service six electric, heated opera buses of the type already used, two large steam gasoline cars and three gasoline touring cars for the long distance routes through the Flatbush section.

"As far as I know, ours is the first school in this country to adopt automobile transportation. The success of the scheme was apparent from the start. The plan at first was to use automobiles for the youngest pupils only, but it became at once the most popular mode of travel for the older students also."

Assaults on Automobilists.

The cry of "Shoot 'em!" as applied to automobilists, which was first raised in New-York, has been travelling to all parts of the country. In Racine County, Wis., the farmers have begun a war against motor cars and their users that promises bloodshed.

The first clash took place at the farm of H. Kiehl, near Franksville, last Saturday night. An automobile with four persons in it came down the road. A woman was coming from the opposite direction with a horse and buggy. The animal was frightened, and when the woman screamed for the machine to stop, the driver did not do so.

Kiehl came to the rescue of the woman and hurled a rock into the front of the machine, disabling it. Hot words ensued, and the automobile owner insisted that he was entitled to one-half the road, and would continue his journey. The farmer insisted that he should not unless he allowed the woman to go by. Rushing into the house, he reappeared with a shotgun and filled the tires of the machine full of holes.

Another outrageous attack, but one with some novelty to it, was committed on an automobile party in the Eastern District of Brooklyn last week. The hoodlums who have been trying to suppress the use of automobiles have added a new weapon to their armory. The pleasant practice of heaving dead cats, garbage and brickbats at women, has been supplemented in Williamsburg by the employment of bombs in the shape of giant firecrackers. Last Wednesday night, in Berry street, a Brooklyn physician, his wife and her sister and brother-in-law, the last named a New York newspaper man, were assaulted in that manner.

They were on their way to Bedford avenue proceeding at a moderate rate of speed through South Third street. After they turned into Berry street they were attacked by a gang of young ruffians in front of a saloon, and a cannon cracker, about eight inches long, exploded just above the head of the woman, so near to one of them that her face was scorched. The burning fragments settled on their clothes, and were brushed off just in time to prevent serious results.

The newspaper man jumped from the automobile, made for the ruffian who appeared to be the ringleader, and proceeded to give him a good trouncing. The young fellow howled so loudly that in a minute later there was a small mob around the pair. The newspaper man rejoined his party, and a search was made for a patrolman, who was discovered a block away, but who could do nothing, as the gang had scattered.

MATTER OF "MIXTURES"

Elementary Chemistry that Applies—The Ideal Mixture and Effects of Dry and Damp Days.

There are many automobilists who, although fully conversant with the mechanism of the various types of engine, yet appear not to have studied the elementary chemistry of the petrol (gasoline) engine, says a writer in *The Autocar*. The "mixture" is referred to as something rather mysterious; some writers enlarging on the advantages of a "rich" mixture over a "poor" one, while others point out that it should be invariably uniform. The latter theory, of course, is correct, but its adherents do not supplement it by an explanation of the facts on which it is based.

Nor, indeed, do many recognized authorities appear to consider it worth while to supply this link in the chain. Chemistry, even in its mildest form, is no doubt a difficult subject to tackle without elementary training, and an excursion into text books dealing with the carbon compounds would, under such circumstances, be unlikely to result in much enlightenment as to the secrets of the combustion chamber. The broad principle, however, of what occurs is not difficult to understand, and once properly grasped should add greatly to the confidence of a motorist in dealing with the "moving spirit" of his engine.

It is necessary, first of all, to appreciate the real meaning of the terms combustion and explosion. Combustion infers burning, and a substance is said to "burn" when its constituents, or some of them, have been raised to such a temperature that they combine with oxygen gas to form other products. This process is always accompanied by an evolution of heat, generally in the form of light, and sometimes sound. An explosion, in relation to oxygen, is simply intensely rapid combustion, and the word is used to express the noisy, bursting effect.

The atmosphere, roughly, is a mechanical mixture of 20 per cent of oxygen gas and 80 per cent of nitrogen gas, and it is the presence of the former which makes combustion one of the most familiar phenomena with which we are acquainted. Nearly every substance can be made to burn or combine with oxygen, and among those which do so readily are carbon and hydrogen gas; petrol is a chemical combination of the two last named.

Charcoal, which is nearly pure carbon, when ignited (i. e., when raised to such a temperature that it combines with oxygen), will continue to burn, glowing redly and giving out considerable heat, until it practically disappears and leaves behind a very small residue of ash. The carbon combines with the oxygen of the air to form carbon dioxide gas, or, as it is more generally called, carbonic acid. During the process there is also nearly always formed, as the result of

incomplete combustion, another highly poisonous gas, called carbon monoxide. Carbon dioxide is heavier than air, and if the charcoal is burnt in a closely shut room settles down and displaces the lower stratum of air. It does not support combustion, so a person lying on the floor of such a room would be quickly suffocated; the danger would be enhanced by the presence of the poisonous monoxide. This will be referred to again later.

Now, it is most important to remember that the elements always combine in definite proportions to form new products. For instance, if in the above room there were used a quantity of charcoal containing just so much carbon as would exactly combine with all the oxygen of the air, there would be left finally, assuming complete combustion, only carbon dioxide and the nitrogen which made up the 80 per cent of air. (It may here be stated that nitrogen is an inert gas, and takes no part in the reactions under discussion). If, however, there were too much charcoal, the fire would go out as soon as all the oxygen was used up, and some charcoal would remain; while, on the other hand, if there were too little, it would all disappear and some oxygen would be left over. The proper appreciation of these three cases is the key to a clear understanding of the "mixture."

Hydrogen gas can be ignited in the air at a tube or burner, and will burn with a pale, intensely hot flame; or, as before, when raised to the necessary temperature, it will combine with the oxygen of the air. The product of combustion in this case is water, but owing to the high temperature is, of course, in the form of steam. This may be seen to condense on the sides of a tumbler held over the flame. If, however, hydrogen and air are first mixed and then ignited, the combination will be accompanied by a violent explosion; in other words, the combustion is almost instantaneous. The tremendous energy of the combination of oxygen with hydrogen and the consequent heat evolved is well shown by the oxyhydrogen flame, which is the combustion of the hydrogen when the two gases are brought together in a pure state at the point required. This flame will melt platinum, which is fusible only at a temperature something like 3,000 degrees Fahrenheit.

Now, petrol—a volatile spirit, given off in the first distillation of petroleum—is, as mentioned before, a chemical compound of hydrogen and carbon, and it is the almost instantaneous occurrence of the two processes of combustion, described separately, which supplies the power in the engine. The petrol, in the form of vapor, having been mixed with air in the so-called carburetter and induction pipe, enters the combustion chamber in a fairly intimate relationship, and at the top of the compression stroke they are, in addition, squeezed and crowded up into a comparatively small space. What happens at the moment of ignition is, theoretically, as follows: The hydrogen seizes first

on its quantum of oxygen, and combines with it to form water; the carbon is therefore set free, and if left to its own devices would precipitate in the finely divided form known as "soot." Owing, however, to the high temperature which results from the immediately preceding combination, and to the presence of the balance of oxygen, it joins with the latter to produce carbon dioxide. The great heat causes the new-formed gases to expand to many times their normal volume, and the piston is thrust down the cylinder in consequence.

It is perhaps unnecessary to add that the products passing to the exhaust will be, with complete combustion, carbon dioxide, steam and nitrogen. Complete combustion, however, is most unlikely to occur in practice, so there is pretty certain to be some carbon monoxide and a variety of hydrocarbon gases and vapors present as well, but as these do not affect the general principle they may be ignored.

It should now be clear that the ideal mixture is that which contains just sufficient air to completely convert the carbon and hydrogen of the petrol to carbon dioxide and water, for if there is an excess of air the charge will naturally be reduced as regards its effective proportions, while if there is an excess of petrol there will not only be a loss of efficiency and waste of spirit, but also a most undesirable deposit of soot in the cylinder and highly perfumed vapors from the exhaust.

This explanation of the procedure in the combustion chamber is a convenient one, but it is not quite true, because the combination does not take place by all the hydrogen and part of the oxygen forming water and then the remaining oxygen and the carbon becoming dioxide; it is more in the nature of a series of separate processes which start in the immediate vicinity of the ignition and spread outward with increasing rapidity as the temperature rises. This is most desirable, as, instead of a very sudden and violent explosion, there is a slow start which overcomes the inertia of the piston and a gradual increase of power which culminates at its full height at the right moment in place of wasting a large portion of its energy in an attempt to burst the cylinder. To put it shortly, it gives the gases time to find the line of least resistance. This, of course, must be within limits, as, if the explosion is too gradual, as may be the case with feeble ignition, there will not be time for the whole charge to be burnt. The higher the temperature of ignition, the more rapid will be the combustion.

It is sometimes stated that an exception to the rule of uniform mixture is at starting, when it should be on the "rich" side. Petrol will form an explosive mixture with air when their proportions lie, roughly, between twenty and forty volumes of the latter and one of the former. It is obvious that as the lower limit of air is approached, or, in other words, with an excess of petrol, there is more probability, as imperfectly mixed

gases enter a cold cylinder, of having a portion of the charge, well within the given limits, in close proximity to the spark. It is, however, hardly correct to call it an exception to the rule, as it is more a case in which efficiency is designedly sacrificed to greater probability of successful first ignition.

Air has the property of holding water vapor in suspension, and the warmer it is the more it can contain. This vapor is lighter than air, and consequently on a warm, damp day the air is lighter than on a cold, dry one. This means that, in the former case, a cubic foot will contain less available oxygen than in the latter; in damp weather, therefore, a slight excess of air over the normal must be admitted. The same efficiency, however, cannot be obtained with damp air as with dry, for two reasons: First, because a proper full charge cannot be obtained; and, second, because a percentage of the heat will be absorbed in converting the moisture into steam.

Care of the Carburetter.

Carburettors are of so many different patterns that it is difficult to prescribe any hard and fast rule for dealing with the troubles that affect them. The float should be examined to be certain that the gasoline does not get inside, and if it has been standing for some time immersed in the spirit, a shake will determine if it is empty or not; then take out the needle valve and turn on the gasoline. It should flow freely into the float chamber; if not, clean out your supply pipe and gauges.

The jet may be cleared with a strand of copper wire, such as is found in your electrical outfit, or, in the case of a Longuemare, the spraying cone can be removed and the channels cleared with a penknife. Don't clean them too vigorously, or you may remove some of the metal and cause the spray to deliver too much gasoline. It may be advisable to grind your needle valve with a touch of knife polish, finishing with some pressure, but without emery. This should show a bright appearance where the cone of the valve fits the seat, and when the brightness extends all round, your valve will be quite tight. In order to keep the valve upright during this process, it is best to put the cover on the float chamber and secure with two or three screws.

The valve rod will generally be found to have a cross cut for screw driver; if not, it is easy to make one. Put the float and jet back in their places and turn on the gasoline; when the float chamber is filled, give the float a joggle and a little gasoline will ooze out at the jet.

To Close a Crack.

To close up a crack in an aluminum crank case use aluminum solder. The part to be soldered must be heated so that the hand can barely be held on it; then the crack must be perfectly cleaned with naphtha, great care being exercised in its application to the heated parts. The solder is applied with a soldering iron in the method adopted by an ordinary tinsmith. Every trace of oil and dirt must be removed or the operation will be a failure.

SOUND SENSE FROM SALEM

Damon Defends Automobilists and Points Out Some Things to the Autophobes.

The unusual activity of the police in the vicinity of Boston and Salem, Mass., of late is arousing the automobilists to resentment, and a second case was last week decided in favor of the accused and against the officer, the first case of acquittal having been that of J. J. Kelliher, which was reported at the time in the Motor World.

The situation in that district has inspired the following argument, or essay, in the Salem News, in the form of a letter, but supposed to be from the pen of the editor, Robin Damon, who is an enthusiastic automobilist:

"I want to say a few words on the automobile question from a user's standpoint. I am not an advocate of high speed in cities and towns, where there is danger of accidents, but when in the country I do not see any harm in running a machine at a rate of twenty to twenty-five miles an hour. An automobile can be controlled so easily that what might be dangerous for a horse is nothing when a machine is concerned.

"The attempts of rural constables to capture automobilists, by setting traps, is more or less on the spotter plan. If the officers really wanted to stop speeding they could accomplish the matter with less trouble to themselves than is now involved by their Hawkshaw methods. Now they have to hide behind trees and manipulate nickel-plated stop watches. Then they must go to court and swear to things they cannot have positive information about. On this point I notice that the officers are always positive regarding the time. Yet at automobile contests, where every possible precaution has been taken, and where men who make a specialty of timing are employed, there is often much doubt about the correctness of figures, even over mile courses. A policeman, provided with a cheap watch, and without previous experience, will glibly swear that an automobile is travelling fifteen, eighteen or twenty miles an hour, when the record is taken over a few hundred feet and in a manner that must be inaccurate, on largely guess work. The courts usually sustain the officers, although I was glad to notice that Judge Burke, of Boston, decided that automobile cases must in future be decided upon the ordinary rules of evidence. It will not be sufficient for officers to charge excessive speed; they must prove it.

"The almost fanatical opponents to automobiles and their speed have entirely overlooked one important feature in connection with the new method of travel. This is the financial part. Millions of dollars have been spent for machines, with the result that taxable property has been increased, employment given to thousands of men, and a lot of cash put into circulation that would not

otherwise be expended. The automobile industry is now a recognized institution, into which a great amount of capital has been put, and still more is going into the business. There seems every reason to believe that the horseless carriage is here to stay, and, like the steam railroad, electric lines, bicycles, gas, electric lights and telephone, it will be improved and amplified, even though there is now intense opposition. It is the same spirit shown toward other modern ideas. The narrow minded men and women who foster such notions will gradually get accustomed to the new methods of travel, just as they have to other innovations.

"I do not advocate the opinion that an automobilist owns the roads, but I do think a man running a machine has as much right as the driver of a horse. As a rule, an automobile is worth three or four times the cost of the ordinary horse-drawn vehicle, and usually the owner of an automobile pays a good sized tax bill, a portion of which goes toward keeping the streets in order. Furthermore, an automobile is a costly carriage to keep running, and few owners deliberately smash them up, so that, although the machines may seem to be operated rather recklessly, the man at the wheel generally knows what he can do.

"Some people talk and act as though automobilists were but little removed from pirates, or highway robbers, or maybe lunatics, who delight in running over men, women and children, just for the sake of seeing them squirm in the dust. Let me say that if automobilists did not exercise more care than drivers of horse-drawn teams and pedestrians, there would be a great many accidents caused by the carelessness of the people injured.

"This year there are a dozen automobiles to one used last summer, and the number is constantly increasing. This is taken as an indication that the employment of the motor car as a vehicle for both pleasure and business is growing popular."

Georgia Goes the Limit.

There is a practical joker in the Georgia Legislature. He has introduced a bill fixing the speed of automobiles at three miles an hour when approaching a vehicle, six miles when turning a curve, and not over twenty at any time when on the public roads. This is in the Empire State of the South!

Users of automobiles are said not to be losing any sleep over the matter, however. They believe that it is too absurd to be passed, even by autophobes.

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The Week's Patents.

766,972. Vehicle Frame. Thornton B. Rennell, Denver, Col. Filed November 30, 1903. Serial No. 183,122. (No model.)

Claim—1. In a vehicle framework, the combination of a sill, a tube secured to said sill intermediate of its ends, plate springs, each pivotally secured at one end to said tube and projecting downward and away from said tube and a downwardly projecting resilient connection interposed between the plate springs and said sill, the plate springs provided with axles at their free ends.

767,043. Non-Collapsible Tire. John T. Dickey and Carry D. Derry, Barberton, Ohio. Filed June 9, 1903. Serial No. 160,683. (No model.)

Claim—1. In a pneumatic tire, the non-collapsible filling, consisting of elastic balls, having spherical air chambers connected by cylindrical perforations, forming one continuous air chamber, a series of cylindrical perforations extending crosswise from said chamber, connecting with an outer air chamber, formed by the balls and the covering material, all substantially as set forth.

767,071. Flash Boiler. Hermann Lemp, Lynn, Mass., assignor, by mesne assignments, to General Electric Company, a corporation of New York. Filed January 16, 1901. Serial No. 43,510. (No model.)

Claim—1. In combination, a sectional flash boiler, a casing therefor, which is divided into compartments, each compartment containing a boiler section, a flue in communication with one compartment through which the products of combustion naturally pass, and a second flue which is in communication with a second compartment for receiving all of the waste products of combustion when the boiler is working under normal conditions.

767,072. Flue Construction for Vehicles. Hermann Lemp, Lynn, Mass., assignor, by mesne assignments, to General Electric Company, a corporation of New York. Filed December 2, 1901. Serial No. 84,326. (No model.)

Claim—1. In combination, a boiler, a burner therefor, a casing for both, a flue open from end to end arranged exterior of the casing, and means of communication between the casing and flue arranged intermediate the ends of each.

767,127. Controller for Automobiles. Alfred C. Stewart, Los Angeles, Cal. Filed October 8, 1903. Serial No. 176,177. (No model.)

Claim—1. A controller for automobiles, comprising a pedal support, a pedal mounted to turn pivotally in a horizontal direction and to yield resiliently downward, and means for holding the pedal against pivotal movement when depressed.

767,242. Wheel Fender. Ferdinand Reichle, Jr., Detroit, Mich. Filed March 7, 1904. Serial No. 197,006. (No model.)

Claim—1. A wheel fender, comprising a securing clip, a laterally projecting guard support, vertically adjustable connections between the support and clip, the guard, and adjustable connections between the guard ends and the support, adjacent the respective ends of the latter.

767,316. Safety Device for Electrically Propelled Vehicles. James H. Spencer, New York, N. Y. Filed April 13, 1900. Serial No. 12,724. (No model.)

Claim—1. A safety device for electrically propelled vehicles, comprising a circuit, a

motor, a switch and a contact device, which, with the said motor and switch is located in said circuit, said contact device being normally in an inactive position to hold the circuit open, and being adapted to be actuated by the operator to close the circuit, said contact device comprising spring pressed members, one of which has electrical connection with the switch and the other with the source of electricity, one member being held by its springs normally out of contact with the other member, substantially as shown and described.

767,323. Insulated Battery Cell. Vincent G. Apple, Dayton, Ohio. Filed November 9, 1903. Serial No. 180,463. (No model.)

Claim—1. As an article of manufacture, a battery cell comprising a containing casing composed of metal, with an exterior covering of insulating material susceptible of vulcanization, vulcanized thereto to constitute therewith an integral casing.

767,402. Device for Inflating Pneumatic Tires. Frederick Glassup, New York, N. Y. Filed October 2, 1903. Serial No. 175,412. (No model.)

Claim—1. The combination with the piston of an air pump, of a reciprocatory bar having approximately a V shape slot therein, a rotatable shaft carrying a disk having a pin arranged to operate in said slot, a gear wheel and pinion, and means imparting motion to the rotatable shaft and disk.

767,529. Vehicle. Walter W. Robinson, Chicago, Ill., assignor, by mesne assignments, to Friedman Automobile Co., Chicago, Ill., a corporation of Illinois. Filed January 10, 1900. Serial No. 929. (No model.)

Claim—1. In a motor vehicle, the combination with a supporting frame, of a motor supported thereby, a driving friction disk driven by the motor, a driven friction wheel arranged to be driven by the friction disk, a movable support carrying said friction wheel and arranged for movement toward and away from the driving disk, steering mechanism, an operating handle mounted so as to permit its being swung in both horizontal and vertical planes, and mechanisms for operating the steering mechanism and for shifting the friction wheel toward and away from the friction disk, one of said mechanisms being operable by a movement of the operating handle in one plane and the other by a movement of the same in the other plane, substantially as described.

767,583. Tire. James B. London, Crestview, Tenn., assignor of one-fourth to James C. Bennett, Crestview, Tenn. Filed February 6, 1903. Serial No. 142,172. (No model.)

Claim—1. In a vehicle wheel, the combination with a felly having groove in its side faces, of a tire comprising a tread portion disposed over the periphery of the felly and including a plurality of layers, and attaching members secured to the side edges of the tread portion and overlapped and secured upon the inner face of the felly, said attaching portions having ribs engaged in the grooves of the felly.

767,606. Vehicle Tire. Charles Stein, Akron, Ohio. Filed October 5, 1903. Serial No. 175,858. (No model.)

Claim—1. A combined wheel rim and tire comprising an inner inflatable tube, an outer protecting and inclosing shoe provided at its inner end with flaps overlapping each other, said flaps extending beyond the centre of the free edges in opposite directions so as to completely inclose the inner tube, means engaging said shoe at points opposite said flaps for preventing spreading thereof, means for firmly securing said shoe to the rim in combination with said rim.

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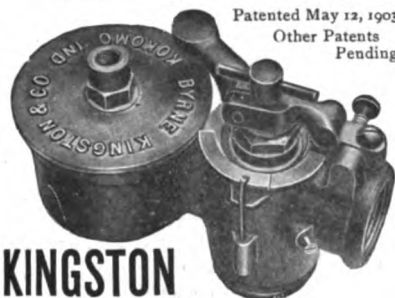
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Applying a Patch.

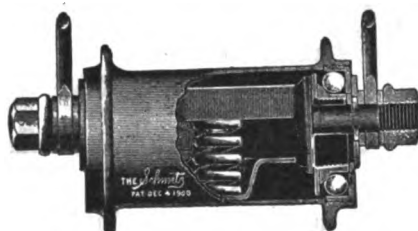
Formerly, when repairing pneumatic tires, it was only necessary to wait until the solution applied to the patch became sticky. With the big motor tires, however, this is not sufficient. The great pressure brought to bear on the half dry layer of solution, combined with the heat produced by fast travelling, either causes the patch to come loose, or a little duct is formed through the solution along which the air escapes.

The proper way to effect a repair is to thoroughly clean both the patch and air tube with sandpaper, then apply with the finger a thin layer of solution to the patch and air tube, taking care that the layer is of even thickness, and that there are no blobs. The solution should be brought out well to the edge of the patch. Both patch and air tube should now be laid aside until the solution is so dry that it will not adhere to the finger. The patch should then be put in position and should be rolled firmly on. Such a repair will never give way.

If by any chance it is necessary to replace an old patch which has failed, every particle of the old solution should be removed if a permanent job is to be made of it. The operation is difficult and tedious, but the application of gasolene will assist.

In case of gasolene becoming accidentally ignited, it is useless to try to extinguish the flame by means of water as the spirit will float on it and continue to burn. Dry sand is very effective as an extinguisher, and a supply should be kept constantly on hand where gasolene is stored or used.

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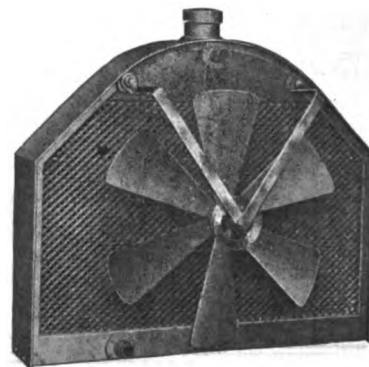
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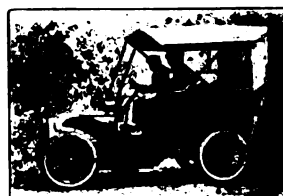
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97-99-101 READE ST., NEW YORK CITY

Retail Branch: 38th St. and Broadway.



Springfield Top

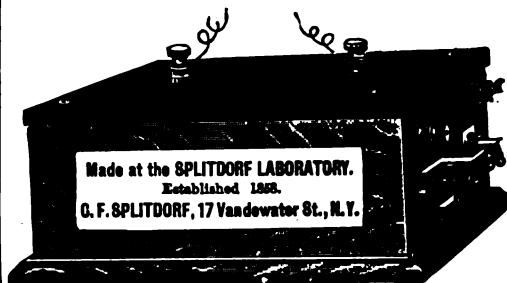
PATENTS PENDING.
Aluminum Bodies
Aluminum Fenders
Aluminum Hoods.

**Springfield Metal
Body Co.,**
7 Cypress St.,
Springfield, Mass.

RADIATORS,

TANKS,
MUFFLERS,
FENDERS,
HOODS.

BRISQEE MFG. CO., - Detroit.



HIGH-GRADE LAMPS

Acetylene Gas and Oil

ATWOOD MFG. CO.,
Amesbury, Mass.



"Jack, what is C H & D, a new breakfast food?"
"No, it's a Railroad from Cincinnati to Chicago." Speaking of food,
I got the best meal on their cars I ever had on a railroad."

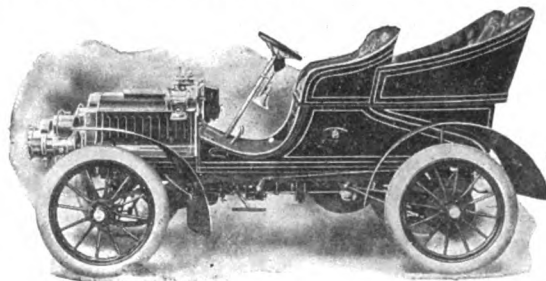
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Oldsmobile

The progress of the Oldsmobile abroad has been a continual triumph. It has led the advance of automobiles into remote corners of the earth. Everywhere it is recognized as the world's standard runabout—*the best thing on wheels.*

Oldsmobile
Standard Runabout
 Price \$650



Oldsmobile
Light Tonneau Car
 Price \$950

The Oldsmobile Curved Front Runabout is the most thoroughly tested automobile in the world. Built upon the solid foundation of Oldsmobile experience the Oldsmobile Light Tonneau Car possesses style, quality and efficiency to an unequalled degree. It is in no sense an experiment. It is built to run and does it. It has plenty of speed and no end of endurance. It is built without gaskets. Cylinder and cylinder-heads are cast integral. Main bearings are self-oiling. The hub-brakes are controlled by foot-lever. There are numerous other distinct features.

Our immense factory facilities—nearly one million square feet of floor space—insures prompt delivery.

OLDS MOTOR WORKS, 1332 Jefferson Avenue, Detroit, U. S. A.

Member of the Association of Licensed Automobile Manufacturers.

"Pope-Toledo"

"The Quiet Mile-a-Minute Car"



24-Horse Power, 4-Cylinder, \$3,500.

September Deliveries.

Pope-Toledo Wins at Cleveland

Pope-Toledos won all the events in which these cars were entered.
8 cylinder won the 5-mile Manufacturers' Challenge Cup and both heats in mile open road race, standing start.

A stock 4 cylinder 24 H. P. car won the 5-mile open, defeating all special cars of other makes, doing the 5 miles from standing start in 5 min. 51 sec. flat.

Stock car also won 5-mile handicap and 5-mile race with full road equipment and four passengers.

Buy a Pope-Toledo and Own a Winning Car.

**POPE MOTOR CAR CO.,
TOLEDO, OHIO.**

Members Association of Licensee Automobile Manufacturers.



THE GOODRICH TIRE RECORD

IN THE
GREAT ST. LOUIS TOUR.
THE BEST YET.

79 Goodrich Tires in the run, or nearly one-third of all.
21 more Goodrich Tires than any other make.

Over 50 per cent. of the Goodrich Tires started from
New York, Boston, Baltimore and Philadelphia.

Nearly 50 per cent. of our nearest competitors' tires
started from Chicago only.

Not a new Goodrich Tire that showed a defect or
developed a weak spot or necessitated replacement.

Two old cases which had run 12,000 and 15,000 miles
respectively, were replaced a short distance out from
St. Louis.

Such a record speaks volumes and gives to the

ORIGINAL AMERICAN CLINCHER
The Cleanest Tire Score Ever Achieved
in the History of Automobiles.

THE B. F. GOODRICH COMPANY,
AKRON, OHIO.

NEW YORK, 66-68 Reade St. and 1625 Broadway.
BOSTON, 157 Summer St. CLEVELAND, 420 Superior St.
CHICAGO, 141 Lake St. PHILADELPHIA, 922 Arch St.
BUFFALO, 9 W. Huron St. DENVER, 1444 Curtis St.
DETROIT, 80 E. Congress St. SAN FRANCISCO, 392 Mission St.
LONDON, E. C., 7 Snow Hill.

BAKER

DISTINCTIVE QUALITY CLASSIFICATION
THE HIGHEST TYPE OF ELECTRIC CARRIAGES

FORCIBLE FEATURES OF EFFICIENCY

THE BAKER RACER THE KID

Established the world records for electrics, at Ormond Beach, Fla.—one mile, 60 3-5 seconds.

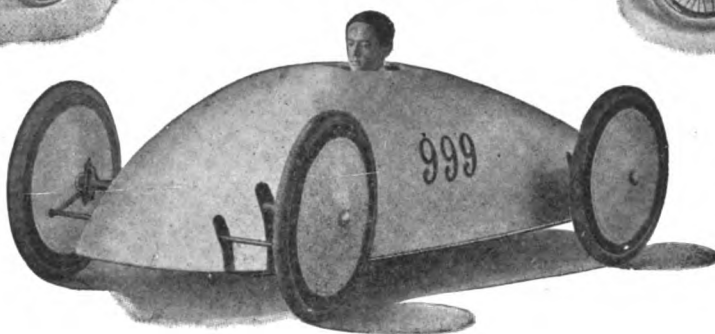
This Racer had a 3-4 h. p. motor and 12 cells of battery of same size and weight as used in our Runabout.



THE IMPERIAL

Same motor, same size battery (12 cells) as used in the Racer.

The efficiency is just the same as the Racer, only differently applied.



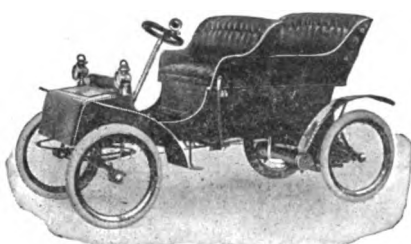
THE STANHOPE

Same motor, same size battery (12 cells) as used in the Racer.

The efficiency is just the same as the Racer, only differently applied.

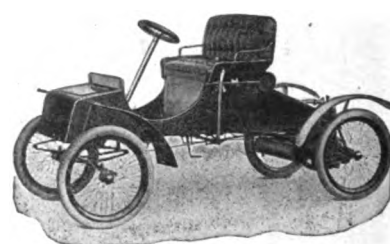
The Bakers are the Best Made, Best Finished, Most Efficient of all Electric Carriages

THE BAKER MOTOR VEHICLE COMPANY, CLEVELAND, OHIO



Tonneau Car, price \$525.

IF YOU KNEW



Runabout, price \$475.

how useful one of these little machines would be to you, and how much pleasure can be derived from them, your order and check would be on the way to us before another sun has set. The following is what one purchaser says; we have received hundreds of similar letters:

WALTHAM MFG. CO., Waltham, Mass.

Gentlemen: I do not wish to take up your valuable time, but I do wish to let you know what I think of the Orient Surrey I purchased of you some four weeks ago. I went to Chicago a week ago and carried four persons, and it is a good distance of over one hundred miles. I made the trip, in and out, in extra good time, and did not have one bit of trouble either way. It is the easiest riding machine that I ever rode in, and as for power will say that I think it has more than you claim for it, as it will climb any kind of a hill, and it is very seldom that I have to use the slow-speed gear. I would have written you some time ago, but I wished to give it a thorough trial, and now I have done so on hill, in sand, and in mud, and am pleased to say that I have never found it wanting in any particular.

Wishing you success, I am,

Yours respectfully,

Ashton, Illinois, July 25, 1904.

N. H. RANDALL.

Write for catalogue.



Surrey, price \$450.

WALTHAM MFG. CO.,

WALTHAM, MASS.



Buckboard, price \$425.

Hand Book of Gasoline Automobiles issued for the information of the Public who are interested in their Manufacture, Sale and Use.

This handsomely bound and artistically printed book now in the hands of the printers will contain about 88 pages and will illustrate about 80 gasoline cars, one car and its specifications to each page. It is issued primarily for convenience and information to the prospective purchaser of an automobile. The products of the principal manufacturers throughout the United States of America and the Importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto in red ink. The questions being uniform, the ease of comparison is obvious and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste, or the means at his command.

Sent upon receipt of 6 cents in stamps for postage.

ASSOCIATION OF LICENSED AUTOMOBILE MANUFACTURERS,

Room 1009—No. 7 East 42nd Street, New York.

WE DON'T MAKE RACING CARS

BUT

The Royal Tourist Model "K"

WON THE

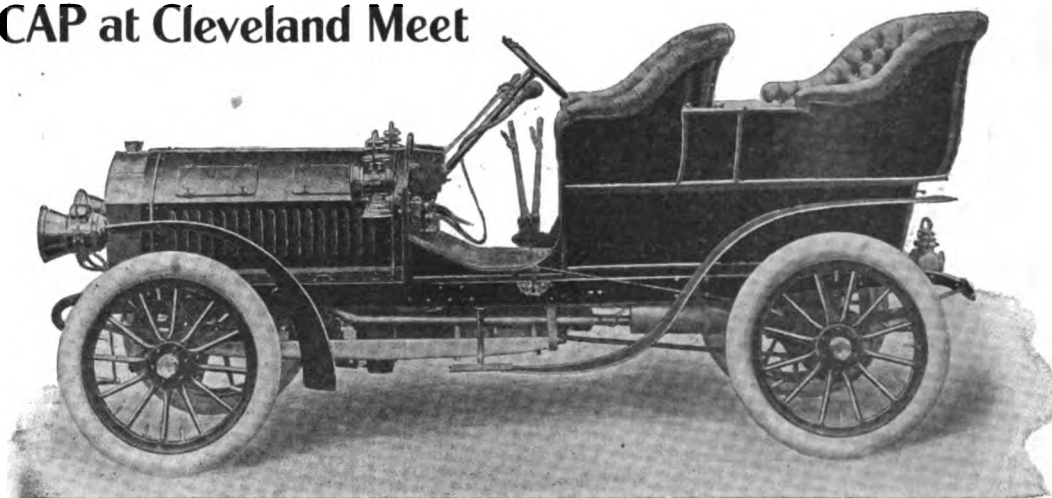
10 MILE HANDICAP at Cleveland Meet

**Over all the
Crack Racing
Cars.**

**THIS IS
THE CAR.** 

\$3000.00.

September Deliveries.



THE ROYAL MOTOR CAR COMPANY, - Cleveland, O.
DUERR-WARD CO., New York. **ILLINOIS MOTOR CAR CO., Chicago.**



If Tire Buyers will take pains to notice how much more compactly our Clincher tire fits the rim than do other brands, they will get something of an idea of the added care that is given to its construction all the way through.



Rims branded in the channel with this copyrighted mark have been inspected and pronounced perfect. We guarantee our tires only on rims so branded.

MORGAN & WRIGHT, CHICAGO

New York

Dayton

Detroit

St. Louis

San Francisco

IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours
CHICAGO 24 hours.



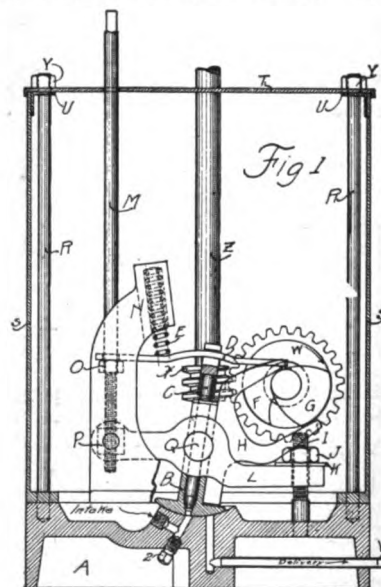
Baltimore 5 days.
New York 4 days,
BOSTON 5 days.

We are supplying the largest Manufacturers—WHY?

THEY GET THE WHEELS.


IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.

THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.



SOLVES THE
Bullock
IGNITION
PROBLEM.

THE **Bullock** IGNITION SYSTEM DOES AWAY WITH ALL INDUCTION AND SPARK COILS, SOOT AND HIGH VOLTAGE TROUBLES.

THE **Bullock** "SPECIAL" CAN BE OPERATED WITH ANY SIZE ORDINARY DRY BATTERIES 6 BEING AMPLY SUFFICIENT AND EFFECTS GREAT ECONOMY IN CURRENT CONSUMPTION.

WRITE FOR BULLETIN - W.

THE BULLOCK-BERESFORD MFG. CO., CLEVELAND, O.

BRETON WOODS, N. H., July 31, 1904.

Some time ago I telegraphed you of winning Gold Medal in two days endurance run through White Mountains. I received no acknowledgment of same, so I take it for granted that you are not interested, although I would say of the seventeen cars entered, fourteen were entered by the makers, and it cost them from \$300.00 to \$700.00 each to do as well or worse than the writer.

About three weeks ago I bought two Model B cars of the Pope Mfg. Co., of Providence, to use at Narragansett Pier, R. I., in livery. Later I changed and came here. The cars are doing good work and I can take four people to any part of the White Mountains as easily as any of the more expensive cars of which we have a number here.

Yours very truly,

(Signed) B. A. LEMONT.

In view of the fact that the CADILLAC which Mr. Lemont drove was a regular stock Model B purchased from one of our dealers, instead of a special built machine driven by a factory expert, we think the performance worthy of notice. THE "CADILLAC CLIMBS."

CADILLAC AUTOMOBILE COMPANY,

Member Association of Licensed Automobile Manufacturers.

DETROIT, - - MICH.

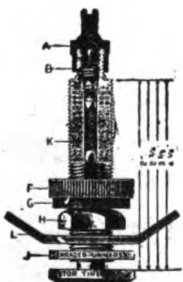
SCHRADER UNIVERSAL VALVE.

Trademark Registered April.

SIMPLE AND ABSOLUTELY AIR TIGHT.

MOTOR TIRE VALVES, as shown in cut, are made in four lengths as shown. Cut is exactly half size of the 2 in. valve

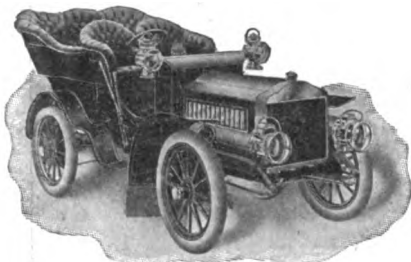
SUPPLIED TO THE TRADE BY ALL TIRE MANUFACTURERS.



MANUFACTURED BY

A. SCHRADER'S SON, Nos. 30-32 Rose Street, New York.

ENTIRE OUTPUT
1904 THOMAS FLYERS SOLD.
NO CAR HAS BETTER REPUTATION.



The 1905 "FLYER"
will shortly be
announced.

GET IN LINE IF INTERESTED.

RIDE IN A "THOMAS"
OR TAKE
"THOMAS" DUST.

E. R. THOMAS MOTOR CO., No. 1210 Niagara St., Buffalo, N. Y.



Hotel Lenox

Boylston and Exeter Streets
Back Bay, BOSTON

ONE OF THE FINEST MODERN
FIRE PROOF HOTELS IN THE
COUNTRY. TWO MINUTES'
WALK FROM THE BACK BAY
STATIONS, AND ONE BLOCK
FROM COPLEY SQUARE

CHARLES A. GLEASON, *Manager*
Send for illustrated booklet

Darracq Motor Cars

SET THE FASHION TO THE WORLD.

Speed, Silenoo, Comfort.

(MICHELIN TIRES USED.)

AMERICAN DARRACQ AUTOMOBILE COMPANY,

Controlled by F. A. LA ROCHE COMPANY,

652 Hudson St. and 147 W. 38th St., New York.

PHILADELPHIA, 317-319 North Broad St.

TO THE COUNTRY CLUB IN A
KNOX WATERLESS GASOLINE CAR

is just the proper car—striking in style, luxurious in appointments, durable and Best by Road Test. Their record for reliability is incontestable. The Knox Patent system of air cooling is the only successful one—no overheating in summer. What others attempt to do the Knox does. Get beautiful catalogue of Tonneaus, Surreys and Runabouts.

6 Styles Passenger Cars and 6 Styles Commercial Cars.

KNOX AUTOMOBILE CO.,
SPRINGFIELD, MASS.

Members Association Licensed Automobile Manufacturers.
Selling Agency in all Principal Cities.

The Best Automobile Motors

AND

Automobile Charging Machines

ARE MADE BY

THE ELWELL-PARKER ELECTRIC CO.,
CLEVELAND, O.

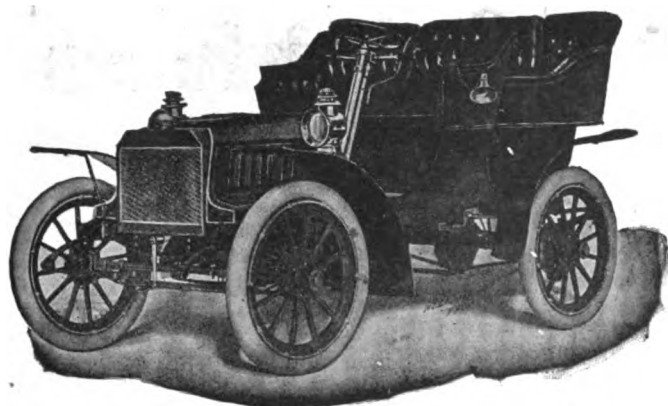
"The A.B.C. of Electricity"

will help you understand many things about motors which may now seem hard of understanding.

108 Pages.

50 Cents Per Copy.

THE GOODMAN COMPANY,
94 TRIBUNE BUILDING, NEW YORK.



FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — **\$1,700** at the factory.

Two cylinder, horizontal, opposed motor in front.	Automatic oiling of engine and other parts.
Ball bearing transmission gear.	Gear drive.
Wheel or lever steerer.	Every part instantly accessible.
Divided front seat.	

THE AUTOCAR COMPANY,
Ardmore, Pa.

BOOKLET.

Member of the Association of Licensed Automobile Manufacturers.

Unique and Unparalleled
Performance of the Pathfinder

ELMORE



The history of automobiling in America records no more sensational performance than that of the Pathfinder Elmore on the recent trip from New York to St. Louis and return. An ordinary stock car was selected to map out the roads in advance of the endurance run. This tremendous trip of more than 5000 miles over villainous roads was made by the Pathfinder Elmore with a repair bill of only 25 cents, and not a single displacement. Did any car in the endurance run—whether it cost \$1000 or \$10000—equal this astonishing record of the \$850 Elmore?

Send for catalogue and the intensely interesting little book "One Long Jump and Two Short Steps."

THE ELMORE MFG. COMPANY,
1104 AMANDA ST., CLYDE, OHIO.

Members of the Association of Licensed Automobile Manufacturers.

"ON the runs I have made this summer, there have been many different types of cars in the parties, and from my experience and from talking with owners of other types of cars, I am thoroughly convinced that the LOCOMOBILE is the most reliable car and has the best machine work in it of any of the American cars."—From a

letter from a well-known pioneer automobilist who drives a LOCOMOBILE GASOLENE CAR.

§ NOTE that LOCOMOBILE Cars can be seen and tried at any Locomobile Branch Office. Front Vertical Motors exclusively. **Prices, \$2,100 Up.**

The Locomobile Company of America,
BRIDGEPORT, CONN.

BRANCHES: NEW YORK, Broadway and 75th St.; PHILADELPHIA, 249 North Broad St.; CHICAGO, 1354 Michigan Ave.; BOSTON, 15 Berkeley St.

Member Association of Licensed Automobile Manufacturers.

Aluminum Bodies

of the
HIGHEST GRADE.

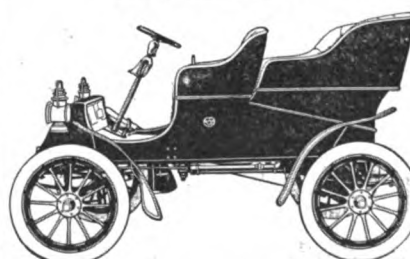
TOPS, FENDERS and HOODS. Painting, Repairing and Remodeling.

Chassis Lengthened and Side Door Entrances a Specialty.

MOORE & MUNGER CO., 602 West 52nd St., New York City
TELEPHONE, 4425 Columbus.

A good name is better than Promises.

THE FORD



has a reputation for reliability, second to no motor car in the world. For the professional or the business man who needs a machine for every day use, THE FORD stands prominent as "The Car of Satisfaction." Verified facts are better than "claims."

10 H. P. Double opposed horizontal motor, cylinder head and water jacket cast in one piece (no packed joints.)

Planetary transmission in oil tight dust proof case.

The perfected construction of the FORD is the result of 15-years actual

experience in building gasoline automobiles. DON'T EXPERIMENT—JUST BUY A FORD. Full particulars and catalogue for the asking.

FORD MOTOR CO., Detroit, Mich.

We Do Not Build Racing Machines BUT

At Del Monte, California, on August 26th and 27th. a regular stock

Rambler

Won the 5-mile race for light touring cars in 8:16¾.

Won the Australian pursuit race for cars costing \$2500 or less in 8¾ miles; time, 17:49.

Won the hill-climbing contest for cars costing between \$1000 and \$2500, on a course 1½ miles long, with grades from 2 to 18 per cent., in 3:04.

Won the 5-mile race for cars costing \$2500 or less, in 6:15¾.

Won the 5-mile race for cars rated at 16 horse power or less, in 6:01.

Rambler

machines entered in eight races and received

Five First and Two Second Prizes.

SUMMARY:

Five miles, for light touring cars:
H. COUSINS, RAMBLER, FIRST
Cuyler Lee, Cadillac, Second
Time, 8:16¾.

Australian Pursuit Race, for cars costing \$2,500 or less:
W. E. SAUNDERS, RAMBLER, FIRST
W. Grothe, White, Second
W. K. Cowan, RAMBLER, Third
Distance, 8¾ miles.
Time, 17:49.

Hill climbing contest for cars costing from \$1,000 to \$2,500:
W. E. SAUNDERS, RAMBLER, FIRST
W. K. Cowan, RAMBLER, Second
W. Grothe, White, Third
Distance, 1½ miles.
Grade, 2 to 18 per cent.
Time, 3:04.

Five miles, for cars costing \$2,500 or less:
W. E. SAUNDERS, RAMBLER, FIRST
W. Grothe, White, Second
W. K. Cowan, RAMBLER, Third
E. E. Russell, Thomas, Fourth
Time, 6:15¾.

Five-mile race for cars not over 16 horsepower:
W. E. SAUNDERS, RAMBLER, FIRST
W. K. Cowan, RAMBLER, Second
Time, 6:01.

Hill climbing contest for cars costing from \$2,000 to \$4,000:
Bert Dingley, Pope-Toledo, FIRST 2:43
W. E. SAUNDERS, RAMBLER, Second 2:47½
H. M. Chambers, Great Arrow, Third 3:25½
W. K. Cowan, RAMBLER, Fourth 3:35
Distance, 1½ miles.
Grade, 2 to 18 per cent.

Why not write for our illustrated motor book; it explains why the

Rambler

excels the high-price cars; it is an American machine, not a copy, and can hold its own in any company.

"Our Little History" is entertaining; it is also free for the asking.

THOMAS B. JEFFERY & COMPANY,

BRANCH HOUSES: { BOSTON, 145 Columbus Avenue.
CHICAGO, 302-304 Wabash Avenue.
PHILADELPHIA, 242 North Broad Street.

Kenosha, Wisconsin.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York, U. S. A., Thursday, September 8, 1904.

No. 24

BOSTON SHOW ROW SETTLED

**Mechanics' Hall Lessees Get Coveted Sanction—
N. A. A. M. Decides Other Show Matters.**

Three interesting meetings of manufacturers were held in New York on Wednesday, and in all of them the show question was foremost. First was the meeting of the Motor and Accessory Manufacturers, at which it was agreed what would be accepted from the N. A. A. M. Then there was a meeting of the show committee of the National Association of Automobile Manufacturers, held, like that of the accessory men, in the forenoon, and finally, in the afternoon, came the meeting of the executive committee of the N. A. A. M.

The show committee had a lively time in the morning, listening to the claims and arguments of the rival trade factions from Boston, both of which wanted the sanction for the show of next spring. The Dealers' Association, which incorporated and made the swift move of securing a lease on the only suitable hall for the show, that in the Mechanics' Building, was represented by a delegation composed of Harry Fosdick, C. I. Campbell and A. E. Gilmore, while the rival trade association was represented by W. W. Burk and A. P. Underhill. First one faction and then the other went before the show committee, and finally both were summoned for a joint hearing, but after all this the show committee left the question to be decided by the executive committee. The latter body awarded the sanction to the Dealers' Association (Incorporated), which has the lease on Mechanics' Hall, but stipulated that this organization must invite the other body to become members, and thereby gain title to a rebate on their space rent, the price of which gave rise to some comment, the sanction being given subject to the approval of the price by the N. A. A. M.

Fourteen members of the executive committee were present at the meeting, and it was decided that the Motor and Accessory Manufacturers shall have 10,000 square feet of space outside of the galleries at the New York show, but that all parts and accessory

makers who are members of the N. A. A. M. shall be included in this allotment, whether they are members of the Motor and Accessory Manufacturers or not. The overflow will go to the galleries, but, under this arrangement, no member of the N. A. A. M. will have to take space in a gallery. This is the situation as reported by the general manager of the N. A. A. M., which does not coincide with the statements of the M. & A. M., who reserve the right to allot space according to their own plans.

It was decided to send out a letter to all members calling their attention anew to the fact of shows now being sanctioned, and warning them that exhibitors in unsanctioned shows will not be admitted to either national show or to any other sanctioned by the N. A. A. M. for a period of eighteen months. The Motor and Accessory Manufacturers, at their meeting, voted in favor of supporting the show sanctions of the N. A. A. M.

Rules for the allotment of space at the New York show were adopted, but, as these are subject to the approval of the Automobile Club of America and the Madison Square Garden Company, they were not given out.

It was voted to hold the next meeting of the executive committee on October 7, in order that the members may be here to see the race for the Vanderbilt cup.

Those present at the meeting were Windsor T. White, president; Charles Clifton, first vice-president; E. H. Cutler, second vice-president; G. W. Bennett, third vice-president; William R. Innis, treasurer; J. Wesley Allison, secretary; S. T. Davis, Locomobile Company of America, Bridgeport, Conn.; Thomas Henderson, Winton Motor Carriage Co., Cleveland, Ohio; S. D. Waldon, Packard Motor Car Co., Detroit, Mich.; J. Wesley Allison, Woods Motor Vehicle Co., Chicago, Ill.; Charles E. Duryea, the Duryea Power Co., Reading, Pa.; William R. Innis, Studebaker Bros. Mfg. Co., South Bend, Ind.; C. C. Hildebrand, the J. Stevens Arms & Tool Co., Chicopee Falls, Mass.; M. J. Budlong, Electric Vehicle Co., Hartford, Conn.; E. H. Cutler, Knox Automobile Co., Springfield, Mass.; Albert L. Pope, Pope Mfg. Co., New York; M. L. Goss, The Baker Motor Vehicle Co., Cleveland, Ohio.

GET THE SPACE SOUGHT

**Accessory Makers Now Favorably Placed in
Show Matters—Reciprocity with N. A. A. M.**

Despite the youth of their organization, the Motor and Accessory Manufacturers demonstrated this week that they lack neither strength nor aggressiveness. As a result, their exhibits at the next New York show will be nearer to earth and farther from heaven than was the case at the last show; it will be motor and accessory makers who are not members of the organization that will nestle near the roof and rafters of Madison Square Garden.

This arrangement was effected at a joint meeting at the New York Athletic Club on Tuesday last of the show committee of the N. A. A. M.—W. T. White, M. J. Budlong and S. A. Miles (Charles Clifton being absent)—and the following committee, representing the Motor and Accessory Manufacturers: Howard E. Raymond, chairman; D. J. Post and W. S. Gorton. The latter committee presented a strong case, and asked that 10,000 square feet of space on the first platform be set aside for their use. The N. A. A. M. committee was found to be favorably disposed, but inclined to reduce the limit to 8,000 square feet. Efforts to effect a compromise were made, but after all was said and done, the M. & A. M. had not only gained its point in this regard, but also an equally important one, i. e., the right to allot the space according to their own plans. President Post will appoint a show committee for the purpose.

The N. A. A. M. having tacitly agreed that its associate membership was no longer desirable, and diplomatically suggested that such members flock with the M. & A. M., the latter, it is understood, will take the bull by at least one horn by requiring the associate members of the N. A. A. M. who desire to share the 10,000 square feet to accompany their applications for space with notice of their resignation from the N. A. A. M., to take effect January 1 next. On their part, all M. & A. M. who are now on the associate

roll of the other organization will tender their own resignations on that date.

Previous to the conference of the joint committee on show matters, the directors of the Motor and Accessory Manufacturers had held a meeting and elected the following new members: Hess-Bright Manufacturing Company, Philadelphia; Rose Manufacturing Company, Philadelphia; Janney-Steinmetz Company, Philadelphia; Crosby Company, Buffalo, N. Y.; Aurora Automatic Machinery Company, Aurora, Ill.; New York and New Jersey Lubricant Co., New York; New Process Raw Hide Company, Syracuse, N. Y.

Several other applications, among them that of the Federal Mfg. Co., were received too late for action.

President D. J. Post reported that on the following day the M. & A. M. "Discount Committee"—which it was agreed was a misleading designation—would meet a similar committee from the N. A. A. M.

On Wednesday these two committees met, and after discussion the following resolution was offered by Mr. D. J. Post and seconded by Mr. Goss, and was carried unanimously:

Resolved, That it is the unanimous sense of this meeting that we recommend that the Motor and Accessory Manufacturers adopt a policy of extending to legitimate automobile manufacturers a reasonable differential in the price of parts and accessories.

The resolution is understood to carry with it a policy of reciprocity. The Accessory Manufacturers will incline to quote the Automobile Manufacturers a more favorable differential than that quoted the jobbers and dealers; on their part, the N. A. A. M. members will incline to purchase from the members of the accessory organization. There is, however, nothing binding or compulsory about the arrangement; it is rather an expression of mutual good will.

The M. & A. M. committee consisted of L. J. Keck, Badger Brass Manufacturing Company; J. W. Gilson, Hartford Rubber Works Company; H. T. Dunn, Fisk Rubber Company; W. B. Post, Billings & Spencer Company, and D. J. Post, Veeder Manufacturing Company. The representatives of the N. A. A. M. were G. W. Bennett, of Thomas B. Jeffery & Co.; M. L. Goss, of the Baker Motor Vehicle Company; R. D. Chapin, of the Olds Motor Works; E. H. Cutler, of the Knox Automobile Company, and S. D. Waldon, of the Packard Motor Car Company.

Columbus Company Seeks Capital.

The Columbus (Ohio) Motor Vehicle Co., makers of the Dumont car, are endeavoring to enlist new capital and to effect a reorganization; it is stated that the continuance of the concern depends on their success in these directions.

Judgment Entered Against Eisenhuth.

On Thursday last, judgment for \$570 was entered in New York against the Eisenhuth Horseless Vehicle Co. The concern's plant at Middletown, Conn., has been closed for some time.

THE ADVANCE IN TIRES

Increase Greater than Originally Anticipated— The Causes that Brought it About.

It develops that the advance in the price of the clincher type of tire is even greater than the 15 per cent reported by the Motor World last week, the figure first agreed on. At a conference of the tire makers in New York this week the subject was canvassed and, the price of crude rubber having increased to \$1.23 per pound, the tire prices were advanced 20 to 25 per cent, according to sizes. The advance will affect both the domestic and imported product, the latter being subject to the clincher license.

The increase is not in the nature of a change in the listed figures, but of the discounts to automobile manufacturers and jobbers, the differential between these two classes of tradesmen have undergone substantial alteration.

One of the best posted tire men said that the increase was forced by the condition of the rubber market. For nearly a year the cost of the crude product has steadily advanced, and in his opinion this advance is not in any sense artificial, but is due solely to the law of supply and demand. Para rubber is the chief reliance, because it most readily lends itself to compounding, and the wet summer in the Para forests has been responsible for undue mortality on the part of the native rubber gatherers, making the number engaged in the work smaller, thus shortening the supply and adding to the cost of gathering. The heavy winter in North America caused an unusual demand for rubber boots and shoes, and this also served to boost the cost of the crude product. The comparatively limited supply necessitated the purchase of much unusual green rubber, and the unusual shrinkage due to this cause has made the price of rubber even greater than the market quotations have made appear.

In the opinion of this tire man, another heavy winter will not improbably send the price to \$1.50 per pound.

English Chain Representative Here.

William Nelson, representing the Coventry Chain Co., Coventry, England, is now in this country with a view of interesting the American trade in the Coventry chains, which are of high repute abroad. They are made in patterns to fit practically all the European cars. A. S. Hill, the head of the Coventry Chain Co., was located in this country for a number of years and is no stranger to the American methods of business. The most expensive chains which he manufactures have the links machined from the solid steel, a process which it is asserted permits of their being made with one-third less pieces than other chains.

The Week's Incorporation.

Chicago, Ill.—H. Paulman & Co., under Illinois laws, with \$10,000 capital, to store and repair automobiles. Incorporators, Henry Paulman, William H. Feindt, Jr., Edmund H. Spratlen.

Automatic Sprinklers Prevent Bad Fire.

Only the presence of automatic sprinklers prevented a fire which occurred in the Stevens-Duryea repair shop at Chicopee Falls, Mass., last week from ending disastrously. As it was, Otto Nestman was badly burned about the hands and face and several cars were slightly injured, and the interior of the shop was wet down by the automatic sprinklers that were started by the heat from the blaze.

Nestman was filling the gasoline tank of his automobile when in some manner the oil exploded without warning. The flames almost enveloped him, but the severe injuries to his hands and arms are due to the fact that he was holding the gasoline can when the explosion occurred. He was taken to his home in Holyoke, where the physicians who attended him found that the burns are so deep that he will be unable to use his hands and arms for some months.

July's Exports Increase.

July proved a good month for American exporters of automobiles and parts. Their value reached the sum of \$183,180, as compared with \$150,739 in July, 1903. For the seven months ending July, 1904, the value of exports was \$1,154,196, a splendid gain when compared with \$878,177, the value of the corresponding period of the present year.

Two Pope Models Reduced.

A reduction in price on two of its models was announced this week by the Pope Mfg. Co.

Hereafter the Pope-Hartford, with tonneau, which has been listed at \$1,200, will be sold at retail for \$1,000, while the Pope-Tribune runabout will be put on the market at \$500, instead of the former price of \$650.

Gibbs Petitioned Into Bankruptcy.

The Gibbs Engineering Co., Glendale, L. I., were petitioned into involuntary bankruptcy on August 31. No statement of assets or liabilities is obtainable. The company was engaged in the manufacture of electric trucks and other commercial vehicles, their most notable production being the traction train for use in the Death Valley borax fields.

Joyce Now Sales Manager.

James Joyce, who for two years has been the factory superintendent of the Electric Vehicle Company, has been appointed general sales manager. He will be succeeded as superintendent by George Wesley, who was formerly superintendent of the New York Transportation Co.

Lackawanna Stock Brings \$2,010.

Forty-six bidders submitted proposals for the stock of the bankrupt Lackawanna Motor Co., of Buffalo, N. Y. The largest bid was that of Henry E. Montgomery, who offered \$2,010. His bid was accepted by Referee Hotchkiss, and the property was ordered sold.

CHICAGO CLUBMEN COCKY

Get Out Injunction Preventing Enforcement of Eight Mile an Hour Limit.

Members of the Chicago Automobile Club are prosecuting the demand for fairer treatment with a daring and pertinacity that must take away the breath of the officials of the Automobile Club of America. Not satisfied with having obtained recently an injunction preventing the enforcement of the ordinance requiring license tags, the club has now had issued a temporary injunction restraining the police of Lake Forest from enforcing the ordinance limiting speed to eight miles an hour. The case on which the fight was made was the arrest of Franklin P. Smith, one of the club members. Sidney P. Gorham, counsel of the club, represented Mr. Smith, with the result that Judge Charles H. Donnelly, of the Circuit Court of Lake County, issued a temporary injunction restraining the city of Lake Forest from further prosecution of Franklin P. Smith and other members of the Chicago Automobile Club associated with him in the suit for alleged illegal speeding of their cars.

Mr. Gorham argued that the ordinance making eight miles an hour the speed limit for automobiles was unreasonable and therefore void.

This is the first time in the history of the sport when a court has decided against the right of a city to regulate its own speed ordinances.

As a result of the decision, the members of the Chicago Automobile Club have taken new hope in their fight to obtain modified regulations governing the running of automobiles in the city's streets.

This fight was started by the automobilists when the City Council passed an ordinance requiring the numbering of automobiles and the licensing of drivers only after they had satisfactorily passed an examination given by the city engineer and the city electrician. An injunction was obtained recently after months of hard work by which the city is restrained from enforcing this ordinance.

The fight against the regulation of the speed limit, or at least the regulation to eight miles an hour, is the principal object in view of automobilists in the city at present, and for the purpose of demonstrating their ability to stop their machines within short distance when going at high rates of speed tests were made only recently which were participated in by many city officials.

As a result of the demonstration to city officials of the controllability of motor cars, City Electrician Ellicott was converted, and one of the remarkable features in the application for the injunction to prevent the enforcing of the speed limit was an affidavit made by Mr. Ellicott, in which he stated that in his opinion the speed limit should permit a rate of eighteen or twenty miles an hour. By this affidavit of the city electrician, automobilists think there is shown a

disposition, on the part of the Chicago officials to raise the speed limit.

If the City Council does not raise the limit when the summer adjournment is over, there is a possibility that an injunction may be asked along the line of the Smith injunction and a test case made in the courts.

Catch Scorchers by Flashlight.

While the Chicago automobilists have been successful in stopping by injunction the enforcement of the speed limit in the village of Lake Forest, adjoining the city, the Chicago police are particularly active in enforcing the speed ordinance in the city. To catch night scorchers in Lincoln Park a new scheme is now being worked.

Small red globed lanterns are the means employed by Captain Bush and his assistants to watch the scorching automobile enthusiasts at night. A system of flash light signals has been devised by which the policemen stationed along the park drives are enabled to time the fast drivers by the use of signals and stop watches. When an automobile is being run at a faster speed than allowed by the ordinance a signal is given to the policeman at the end of the line, and he halts the approaching machine by a wave of his red lantern.

A. L. A. M. Handbook is Out.

The handbook of the Association of Licensed Automobile Manufacturers made its appearance this week. It is a magnificent publication, that abundantly bears out the promise made for it. It superbly illustrates some seventy-six cars, and answers briefly the leading questions regarding each that arises in the minds of prospective purchasers. As a reference book for dealers, it is also of great value, containing within one cover the catalogue specifications of practically all the leading gasoline cars.

Rents and Hires Exclusively.

The Auto Renting Company, for the exclusive renting of motor cars, is a new concern, located at the corner of Bleecker and Plane streets, Newark, N. J. The company will make a specialty of renting machines by the hour, day or week, and will also conduct a hacking service. R. C. Dean, formerly with L. J. Wyckoff, organized the company.

Rambler Branch for Philadelphia.

The number of Rambler stores has been increased by the establishment of a branch at 243 North Broad street, Philadelphia, by Thomas B. Jeffery & Co. W. F. Smith, until recently a travelling representative of the Kenosha concern, and who has been in the Jeffery employ for a dozen years, is in charge as manager.

Have Good Taste in Wrenches.

An item, small in itself, but conveying wholesome lesson, is contained in the tool kit of most of the French cars imported into this country. Included in each are wrenches and pliers of Billings & Spencer manufacture.

GUARDING THE PRODUCTION

Members of Licensed Association Submit Reports on Past and Proposed Output to Committee.

How the Association of Licensed Automobile Manufacturers are co-operating to prevent injury through overproduction, or profitless prices, was gleaned after the first session of a two days' meeting, held at the New York offices on Wednesday and Thursday of this week. Nothing concerning the proceedings were given out officially, but, through conversation with some of the members, it was gathered that there had been a "heart to heart talk" on the subject of production and prices. The members submitted lists of the four-cylinder cars they made and sold this year, and what they expected to make next year. A committee was appointed to compare these lists and report as to the probability of the market consuming the proposed production. It is understood that there was also a council on the subject of stiffening the prices on four-cylinder cars.

Mississippi County's Absurd Law.

A communication of peculiar interest from the Olds Motor Works was received by the executive committee of the N. A. A. M. and read at the meeting on Tuesday, but no action was taken on it.

The letter stated that the officials of a county in Mississippi have passed a law prohibiting the use of automobiles on the highways of the county, and prescribing a fine of \$100 for the owner of any motor car found using the public roads.

Will Handle Olds in Des Moines.

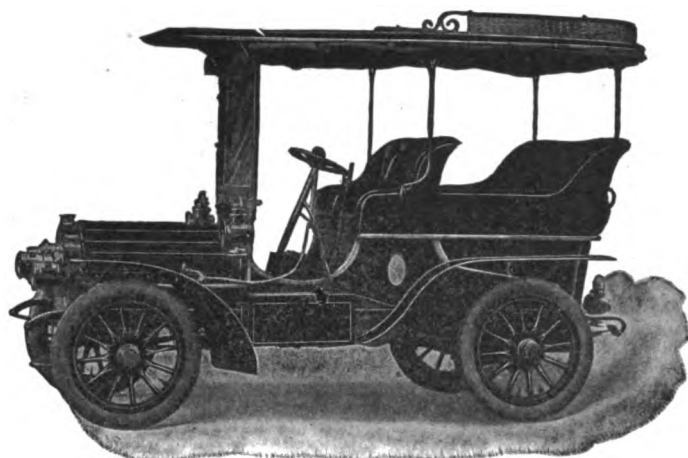
Under the name of the Olds Engine and Automobile Company, a store has been opened at Des Moines, Ia., to handle the product of the Olds Motor Works. The store is located at 400 and 411 West Ninth street, and will be in charge of Campbell Bros., well known locally. Especial attention will be given to the sale of delivery wagons and other commercial vehicles.

Felker Buys Lots for Addition.

So greatly has the business of W. B. Felker, of Denver, Col., increased that he has been compelled to arrange for an enlargement of his quarters. To that end he has purchased two lots adjoining his place on Tremont street, and will tear down the one-story building now standing there and erect an addition to his garage. The latter will thus cover the whole plot.

Australian Buyer in New York.

P. W. Armstrong, representing the Australian Motor and Cycle Agency, of Perth, West Australia, is in New York this week taking on new accounts and renewing old ones. He goes from here to Toronto before leaving for San Francisco and home.



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1904
Tonneau

TWO MODELS

1904 Light
Touring Car

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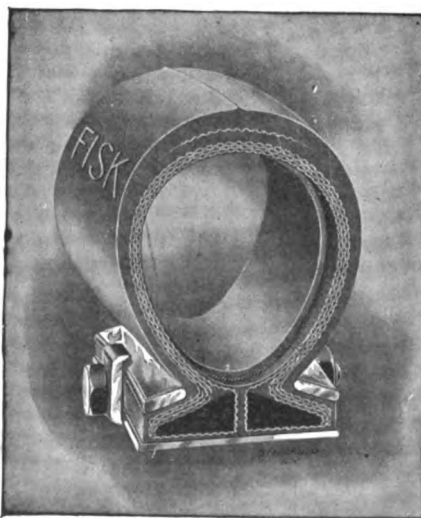
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NEW YORK, SEPTEMBER 8, 1904.

A Harmful Type of Repairman.

While the situation created by the Selden patent has acted as a wholesome check to the bubble-blowing promoter, it unfortunately has not been able to exercise the same beneficial influence on the growth of garages and repair shops, of which there is every sign of a mushroomlike increase.

Generally speaking, the more prosperous bicycle dealers long since established themselves in the automobile trade, and really constituted its backbone; by a process of possibly natural gravitation many of the more lowly ones have followed in their wake, and now the fever appears to have seized the humbler repairer, and each day, in increasing numbers, he is, by great stinting, either enlarging his modest establishment in order to accommodate a car or two or three, or, at any rate, is hanging out the shingle "Auto Repairs."

The supreme confidence that attends these

proceedings is not short of remarkable, and promises much mixed results. Save in a few instances, inexperience is the chief portion of the men concerned. Practically the only automobile "repairs" they have performed have been the occasional inflation of a tire. But the lack of experience in no wise deters them. Possessed of the blissful belief that there are "millions in it," they are prepared to undertake any repair, or to "make a bluff at it" at any rate, and to charge stiff prices for their work.

Within the past week an instance that very nicely illustrates the situation came to our notice. Two repairmen combined their slender forces, enlarged an establishment and hung out their sign. To our certain knowledge neither had more than peered into the interior of an automobile, and but a few weeks since knew so little about motors that one of them was heard to ask a friend the difference between a two-cycle and a four-cycle motor. They knew absolutely nothing of the subject, but when an inquiring automobilist dropped in and asked the price of a simple repair, the figure named was so high that it caused him to remark the fact.

"This is no cheap place," was the immediate and injured retort of the erstwhile bicycle repairman.

The instance is a typical one. It indicates how automobilists are expected to pay not only for the support but for the education of many of those who are projecting themselves into the business. With the increase of this class—and next year, as suggested, will almost certainly witness a very marked increase—the man with an expensive car that requires attention must needs exercise caution in selecting the place for repairs.

The Real Cause of Accidents.

Happily, the once familiar newspaper reports of automobiles "exploding" are now rare. With the increase of cars there apparently has come increased wisdom on the part of reporters. But in the stead of such injurious stories there is being reaped a choice crop of accidents alleged to be due to the automobile having become "unmanageable."

This order of thing is, if anything, more damaging to the automobile interests than the "explosions" which never occurred, and no opportunity should be neglected to check such flights of reportorial fancy. For while the idea prevails, or is permitted to spread, that the motor car

may become unmanageable and "run away" with its occupants, just so long will it be viewed by many—women and elderly folk in particular—as a dangerous vehicle and one, therefore, to be shunned or viewed with distrust. The class of people who are affected by this idea are, generally speaking, likely purchasers of cars whose patronage and favor are highly desirable.

As a matter of fact, ninety-nine-one hundredths of all accidents that have occurred or may occur safely may be charged to two causes—(1) the recklessness or carelessness of experienced drivers in speeding and in "taking chances," or (2) the "losing of his head" by the inexperienced driver, usually in attempting undue speed.

This means, in substance, that in 99 cases out of 100 it is the man and not the machine that is in fault.

To all practical purposes it is impossible for the machine to become unmanageable. It may stop, of its own accord, but, unlike a horse, never can it go until it is started, and once started, and also unlike the horse, it can go only in the direction in which it is driven, and it has no will of its own to accelerate its speed—all, all is subject to the eye and the hand of the man at the steering wheel.

These facts are patent to all. In time they may obtain general lodgement. The sooner they are better understood, the better will it be for the automobile interests. The onus now usually loaded on the automobile should be placed where it rightfully belongs—on the man.

When its driver is a "safe" man, the safety of the car can never enter into question.

The Mishawaka Method of Repression.

An almost virgin field is open to the genus crank, viz., that of devising methods of summarily halting alleged speeding motorists who won't stop at the command of non-uniformed constables. So far the prize plan is that of a man living at Mishawaka, Ind., and his plan is to be put into use in his native town.

Mishawaka has several miles of asphalt paving on a straight roadway, and it is a favorite speedway for tourists. The office of the chief of police is near the centre of this stretch. In front of the office a groove will be cut in the paving, and in this will be set a long knife blade extending the width of the street. A level in the police station will raise this knife about two inches above the paving whenever the word is given that a scorcher is approaching and

refuses to stop. As the blade is sharp, it will cut all four tires on the car, and then the police can go out and gather in the lawbreaker at will.

What might happen to the occupants of the car thus suddenly wrecked is a matter of conjecture, but it does not worry the man from Mishawaka. The car will be stopped; that is a certainty. What occurs after that is a matter of small moment. So is the guilt or innocence of the motorist.

A surer, and scarcely more painful, method would be to mine a section of roadway and blow the criminals to heaven when they reached it. Or a double-barrelled shotgun loaded with slugs would prove equally effective.

Why Power is Increased.

To the average non-motorist the desire for more power, which is felt so universally by users of automobiles, seems one of the strangest manifestations possible to conceive. That four or five horsepower is not an abundance to drive a runabout carrying two persons, as is contended by all who have had experience with this amount of power, is to him an assertion ridiculous in the extreme. He is almost certain to ascribe the wish for six or eight or ten horsepower to a desire to ape the rich man, with his 40 or 50 horsepower monster, costing as many thousands of dollars as the more modest car does hundreds. "Fashion's edict is more power," he will say, "and every mother's son of them takes up the cry and refuses to be happy until they get it."

There is just enough truth in this contention to lend it a semblance of plausibility. Starting with the theory that the automobile was merely a substitute for the horse-drawn vehicle, automobiles were originally both underpowered and underweighted. With experience came a realization of the fact that the automobile was no more like the buggy than the latter was like the ox-cart of old or the railroad train like the stage coach of the eighteenth or nineteenth centuries. It was in a class by itself, and must pass through a process of evolution, from which it was to emerge in a totally new form. All this has been accomplished, not quickly or easily, but by degrees and with much difficulty. An entirely new type was produced, embodying the lesson of experience and acquired piecemeal.

In producing that type the lesson was learned once for all that without ample power an automobile was a lame and inefficient servant. By ample power was

meant what in any other branch of mechanics would be regarded as an excess of it. That this demand for power should be coincident with the passage of restrictive ordinances, which—like Cadmean teeth—sprang up as if in response to some fell signal, is not the least abnormal feature of the case. As measures were taken to decrease speed motorists demanded more and more strongly that increased power—which is only another way of spelling speed—should be incorporated in the modern car. To-day the spectacle is presented of cars that possess—almost without exception—speed far in excess of that which can be legally employed.

To the layman, as already stated, this is an amazing condition. Yet it is both logical and easy to understand, no less than to explain. The satisfactory car is that one which goes along always with a reserve of power, and with an almost unvarying speed over all characters of roads. It does not strain and groan and protest audibly at the unfair and unintended quantity of work that is forced upon it, but eats up hills and bad roads as if it enjoyed them for a regular diet. It does not have to slack down to a four or six mile pace on a steep grade merely because there is not sufficient power to take it on the high speed. It is almost independent of speed changes. It wears and runs better and lasts longer because it is always kept within bounds.

That speed begets a desire for more speed few will deny. In the case of the average motorist that desire is not for speeds in excess of thirty or forty miles an hour; rather is it for an even speed, the ability to maintain an average pace whatever the character of the road may be—level, hilly, soft or hard.

Of almost equal importance is the wish for this desirable consummation without fuss or flurry. An inanimate mass like a motor does not possess the sensibility of a horse, nor is it susceptible to pain or fatigue; but it can be so overdriven that it will protest in a variety of ways, and thus advertise the fact to all who are near. When thus overdriven it will not only be unable to do its best work, but its liability to break down is tremendously increased. It must be humored and nursed, borne with patiently at all times.

All this is distasteful to its owner or driver, and as soon as the latter learns to diagnose the trouble and finds that an increase of power will cure the ills complained

of, he will take the necessary steps to acquire that increased power.

A typical illustration of how the daily press is serving the interests of the automobile was furnished in the issue of "The New York Herald" of September 2. An automobile mishap in Central Park occupied a half column; the car was said to have become unmanageable in the hands of an experienced chauffeur. A large photographic illustration of the wreck was also given space. A runaway accident in the same park, and in which a prominent actress figured, occupied only two inches of space near the bottom of the page, and a similar accident in Long Island to a prominent New York lady was given a little more prominence, owing, no doubt, to the fact that the horses became frightened at a passing automobile.

Milwaukee is setting a mischievous example in requiring local registration and the display of local numbers; the mischief is magnified by exempting only those non-residents whose "home towns" impose similar conditions. As Madison, also in Wisconsin, has been moved to follow Milwaukee's lead in the matter, if the practice spreads much further the burden imposed on the motorists whose "home towns" treat them as the owners of other vehicles are treated will become wellnigh unbearable. State numbering is bad enough, but when municipalities begin to apply the principle, the multiplicity of numbers makes the whole system a farce and brings chaos in sight.

It would be a happy idea did the manufacturers who engage in racing adopt, each of them, a coat or blouse of distinctive color or combination of colors, for use by their several drivers. It would add not a little to the picturesqueness of a sport on which there is too little of that virtue. One thing, however, can be and should be suppressed, and that is the untidy driver who appears wearing a collarless shirt or a vest without a coat. Appearance counts for something even on a racetrack.

There is more than a suspicion of truth in a wit's definition of a chauffeur, i. e., "A person who is clever enough to run a machine and wise enough not to own one." One's friends' automobiles are much cheaper than one's own, even if there is not quite as much fun in it for the chauffeur as there is for the owner.

SPEED CONTESTS SHELVED

French Motorists Turn Attention to Tests and Competitions—Kerosene Gains Ground.

Paris, Aug. 26.—It is, of course, exaggerating matters to say that the days of automobile racing are at an end, because, even though all other contests should be suppressed, there still remain the Bennett Cup competition and the elimination races; but it is to be feared that, apart from these events, we are not likely to see any more long distance races in Europe, unless they are carried out on inclosed tracks.

Even the short distance speed contests have gone by the board, and except for those that were held at Ostend recently and the 500 kilometre test at Uriage, near Grenoble, all the speed competitions have dropped out of the programme. This is the case with the annual meeting at Deauville, which, it will be remembered, began with a kilometre contest three years ago, and then, as the course available was not long enough to allow of the cars being safely brought to a stop at the increasingly high speeds, the distance was reduced to 500 metres, when it became purely a test of starting and braking efficiency. This reduction of the distance, however, does not seem to have reassured the promoters of the different meetings, who feared that with cars capable of travelling up to 100 miles an hour even the 500 metres test cannot be carried out with safety unless the course is sufficiently long to allow of the cars being brought comfortably to a standstill. For this reason, one by one, all the annual fixtures have been dropping out, and the Deauville meeting, like some others, has become a thing of the past. It has been replaced by a gymkhana, which proved to be the delight of nursery maids and the despair of sensible men who think that no good can be done by bringing automobilism to the level of a pantomime.

This narrowing down of the sporting programme is not altogether without an advantage, because if you stop the movement in one direction it must find an outlet in another, and just now the energies of organizers are being devoted to the carrying out of practical tests of all kinds, which are bound to give interesting and valuable results. One of these is a test of the mechanical efficiency of running gears, which will be carried out in October at the Conservatoire National des Arts et Metiers. It is curious that so far nothing has been done to comparatively test the different systems of transmission. A few experiments have been carried out from time to time with some of the running gears, although the conditions under which this was done do not give much value to the results. Even now makers are a good deal at variance as to the amount of power absorbed by mechanical transmissions, and they are so far from coming to a decision as to the relative efficiency of chain

drive and bevel gear and electrical transmissions and the like that they are generally disposed to clinch the matter by saying that one is just as good as the other. It is clear, however, that there must be a difference in the power absorbed by these different systems of transmission, and if the exact percentage were known it would do much to guide manufacturers in perfecting their vehicles. Seeing how carefully the forthcoming tests are to be carried out, it may be taken for granted that, for the first time, we shall have some solid data to go upon in estimating the part which the running gear plays in the economy of the motor vehicle.

October, indeed, promises to be a prolific month for tests and competitions of all kinds, for, apart from the usual hill climbing events at Château-Thierry and Gaillon, there is to be an important trial of motor vehicles for military purposes which is to be carried out by the French War Department. It must be admitted that so far the automobile has not come into so much use for military work as had been expected, although this may be due to the excessive caution of the authorities, who will not adopt anything new until they have put it to a long and searching test. For the moment the motor car is employed simply for the transport of officers, in which it, of course, does very useful service. For the heavy work of hauling military wagons and guns the only vehicles employed are a few Scotte steam tractors that have now been in service for some years; yet it does not appear as if their number has been appreciably increased. That the authorities have plenty of confidence in the future of the motor car for heavy field work is proved by the trials to be carried out shortly, when the vehicles will be put to one of the hardest tests that they have yet had to go through.

Another phase of the increasing interest which is being taken in the utilitarian aspect of automobilism is seen in the discussion that is taking place upon the relative value of kerosene and alcohol. The vegetable spirit has proved very disappointing to those who a few years ago looked forward to the motor car reviving the French agricultural industry by opening up an almost unlimited field for the consumption of alcohol. This failure is due not to the character of the spirit itself, which possesses all the qualities claimed for it, and is in certain respects even superior to other fuels; but the great hindrance to the general employment of alcohol—and one that seems to be almost unavoidable—is the high cost of the spirit compared with other liquid fuels, for, seeing that the consumption of alcohol is greater than that of gasoline or kerosene for a given power, it must be sold at a much lower figure if it is to have any chance of replacing them. For the moment the alcohol question is at a deadlock, because it is impossible to do anything further unless the State will sacrifice its revenue from the agricultural spirit, and as there is extremely small hope

of this being done, automobilists are beginning to pay more and more attention to the utilization of kerosene. This fuel has been making such considerable strides during the past year or two that the time does not seem to be far distant when it will entirely replace the rectified spirit.

Experiments carefully carried out have shown manufacturers the exact conditions under which kerosene should be burned, when it is found to give more power than gasoline and is at the same time cheaper and safer. The only difficulty has been in the designing of suitable carburettors, of which a number are now on the market, including the Claudel, Cremorne, Longuemare and others. Fitted to existing types of motors, any of these carburettors will develop more power than if the engine were using gasoline, and as the secret of their success is the thorough way in which they convert the liquid into a perfectly volatile gas, that is entirely consumed in the cylinder without leaving a deposit, the old objection to kerosene that it fouls the valves and cylinders has been entirely overcome. Both in England and France the kerosene problem is being successfully worked out, while in Germany and other highly protected countries attention continues to be centred entirely upon the utilization of alcohol.

A special stimulus has been given to the kerosene question by the increasing popularity of the motor boat, which it is felt will have to be propelled by kerosene engines if it is to avoid accidents from fire similar to those that took place at Monaco and elsewhere. By a singular coincidence, however, the only boat that caught fire in the Paris-to-the-sea race was one propelled by a kerosene engine.

Discussing French Cup Trial Rules.

Many proposals are being made regarding changes in the rules for the 1905 French Bennett Cup eliminating trials. One of these, emanating from the Marquis de Dion, provides that each maker shall enter three vehicles. The make selected shall be from the team making the best average time in the trials, which will be over a 621-mile course, and extending over two days. No repairs or adjustments of any kind, even to pneumatic tires, shall be made except in running time. Racers must make their own repairs from materials carried aboard. This will do away with the army of mechanics and the huge store of spare covers scattered in depots along the race road.

Changes in Hill Climbing Contests.

This year there will be a change in the programs of the Château-Thierry and Gaillon hill climbing competitions. The events will take place on the 23d and 30th of October. The Château-Thierry hill, which, on the whole, is much more difficult than that of Gaillon, has a capital defect; its two turnings render it impossible for racing cars. Therefore it has been decided to reserve the Château-Thierry race for touring cars and the Gaillon race for speed tests.

A GREAT CUP RACE

Contest on Long Island for Vanderbilt Trophy has Thirteen Entries—Details of Arrangements.

There is no doubt but what the race for the cup presented by William K. Vanderbilt, jr., to be run on October 8, on Long Island, will be an event of size and note, and a true international contest, although not so representative of the American industry as it should be.

By cable, mail and telegraph, entries were made during this week, that brought the total up to thirteen by Wednesday, the day before that fixed for the closing of the entries. Of these nine were cars of foreign make, and only four of American manufacture. The full list of entries up to the time named was as follows:

By the German Automobile Club—Three Mercedes of 60 horsepower each, one owned by S. B. Stevens, to be driven by him; a second, owned by George Arents, jr., to be driven by Carl Mensel, and the third, supposed to be the car of Clarence Gray Dinsmore, to be driven by G. Worden, the American, who drove an Austrian Mercedes in the Bennett Cup race.

By the French Automobile Club—Three Panhards of 90 horsepower each, and one Clement, of 80 horsepower; the Clement to be driven by Albert Clement, one Panhard being that of George D. Heath, the American who won the Circuit Ardennes, the second and third being cars entered by Panhard & Levassor, one to be driven by M. Tarte and the other by a driver not yet nominated.

By the Italian Automobile Club—Two Fiat cars of 90 horsepower each, one being that of A. G. Vanderbilt, to be driven by Paul Sartori, and the other being that of William Wallace, of Boston, driver unknown.

By the Automobile Club of America—Two White steamers of 60 horsepower each, one to be driven by Rollin White and the other by Webb Jay; one Pope-Toledo of 60 horsepower, belonging to Orlando Weber, entered by the Pope Mfg. Co., and to be driven by A. C. Webb; one Royal Tourist of 36 horsepower, entered by the Royal Motor Car Co., to be driven by Joseph Tracy.

Besides these, it was expected that at the last minute a Smith & Mabley Simplex would be entered by Frank H. Croker, and that the Packard "Gray Wolf" would be entered by the Packard Motor Car Co.

At a meeting of the directors of the American Automobile Association, held on Tuesday, a lengthy report made by the race committee was approved, and a number of important details settled. The racing board was authorized to proceed with the erection of a grandstand at the starting point, which was definitely settled upon as at the pump at Westbury. The grandstand will be built to seat 400 persons, and tickets will be \$5 each. The demand for tickets has already

begun, twenty-five being sold. It was planned to build in the stand ten boxes at \$50 each. Of these ten, five were subscribed for at the meeting Tuesday, two being bought by Windsor T. White, one by President H. W. Whipple of the A. A. A., one by W. C. Temple, of the Pittsburg Automobile Club, and one by George E. Farrington, treasurer of the A. A. A. On Wednesday morning two more boxes were bought by W. K. Vanderbilt, jr., one by A. C. Bostock and one by O. H. P. Belmont. It was then decided to increase the number of boxes to twenty.

Every precaution is to be taken to safeguard the public, and the competitors on the course, and it has been stated that more money will be spent on the thirty-two-mile stretch than was spent on the Circuit Ardennes. On the day of the race the cross roads will be closed by means of posts with wire strung between them, and 125 special policemen will be employed on the course. The turns and all other portions of the road where it is necessary will be sprinkled with oil to lay the dust.

The course is 32.40 miles in length, and the cars will pass the grandstand at speed nine times, besides finishing there at speed. Of the whole course 6,557 feet lie within the line of New York City, in Queens Borough, and because of this a special resolution had to be adopted by the New York Aldermen and go to the Mayor to be signed, besides the special permission granted by the authorities of Nassau County.

The race committee of the A. A. A. has pledged itself collectively and individually to the protection of those living along the course and using the road from any accident due to practice speeding before the race. To this end special vigilance will be exercised by the police between now and October 8.

Chairman Pardington says that not only will any competitor caught speeding on the course between now and the time of the race be disqualified, but that at a conference with Mr. W. K. Vanderbilt, jr., it was agreed that should any casualty occur on the course, due to speeding, prior to October 8, the race will be called off.

The allotment of numbers for the contestants and their time of starting will be made at the Automobile Club of America on the evening of October 1. The contestants will be started at three-minute intervals. There will be two "controls" on the course, one of three minutes and one of six minutes, at Hicksville and Hempstead, respectively. The racing board of the A. A. A. will have its headquarters at the Garden City Hotel from October 5 to 8, inclusive.

The course over which the race is to be held is in shape an elongated triangle, somewhat resembling a cone, the base lying to the eastward between Plain Edge and Jericho and the point of the cone being at Queens. The starting point at Westbury is on the north side of the triangle, or cone, toward the base. Starting from Westbury, the cars will run east to Jericho, where the first turn must be made, then south to Plain Edge,

where the second turn occurs; then west to Queens, where the third turn is, and then back northeast to Westbury. The turns are all sharp ones, and are to be made to the right. The first control after leaving Westbury is the three-minute one, at Hicksville, between Jericho and Plain Edge. The second control of six minutes, at Hempstead, is about half way between Plain Edge and Queens. There are several railroad crossings on the course.

Open House During Cup Race.

The Long Island Automobile Club will keep "open house" at its now quarters, on Vanderbilt avenue, Brooklyn, during the days preceding and following the Vanderbilt cup race. All persons with A. A. A. affiliations will be made at home in the club, and to each of the competitors in the race has been sent a letter saying:

The board of governors of the Long Island Automobile Club extend to you, without charge, the use of its commodious garage, from September 15 to October 8. As a competitor in the Vanderbilt cup race, to be held on Long Island, you may find it convenient for storing your racing and touring cars.

The clubhouse is accessible to all parts of Brooklyn and New-York, being close to the Parkway system of Brooklyn, which connects directly with the macadam highways leading to the circuit.

A club attendant is on duty at all hours to admit you and render such assistance as you may desire. To you will be extended the courtesy of purchasing supplies at the reduced rates charged to club members.

Upon receipt of advice from you that you desire to avail yourself of these conveniences, a card entitling you to the same will be sent.

Goulds Toured 4,000 Miles Abroad.

George J. Gould, with Mrs. Gould and Miss Gould, returned on Saturday last from his annual trip abroad. Mr. Gould said:

"We left here on June 25. We did nothing on our vacation except motor. We toured 4,000 miles through England, France, Switzerland, Austria and Germany. We had no breakdowns and no accidents.

"I ran the car the entire distance, except one hundred miles, and did not kill even a chicken. We wandered around without set programme, stopping over night or one or two days at any place that looked interesting."

Butler Resigns Racing Secretaryship.

Defending the cases of automobilists arrested by overzealous country constables, and seeking evidence for the prosecution of persons who stone or shoot at motor car users, is keeping Secretary S. M. Butler of the Automobile Club of America very busy nowadays. His time is taken up so completely with club affairs, in fact, that he has felt obliged to resign as secretary of the racing board of the A. A. A. He handed in his resignation at a meeting of the directors held on Tuesday of this week, and it was accepted. The vacancy is yet to be filled.

TAME SPORT AT WASHINGTON

Six Thousand People Witness Uninteresting Contests—Few Starters and Many Runaways.

Six thousand people who witnessed the automobile races at Bennings track, Washington, D. C., on Labor Day, carried home no impressions likely to encourage them to again pay for the privilege. The sport was tame and uninteresting. There were few entries and fewer starters, and, save in the five miles for cars listing at less than \$1,000, there was no semblance of a real contest; in this event, in which five started, there was a prospect of a close finish, but the prospect faded after the first few laps, and it degenerated into a runaway like all the other so-called races.

The summary:

Five miles, for gasoline machines weighing from 881 to 1,432 pounds—A. L. Kull (Ford), first; H. A. Rhine (Haynes), second. Time, 8:07 3-5. Two starters.

Three miles, for gasoline machines weighing from 1,432 to 2,204 pounds—A. L. Kull (Ford), first; E. P. Nussbaum (Olds), second; F. P. Libbey (Olds), third. Time, 5:45 4-5. Three starters.

Five miles, for gasoline machines listing at \$1,000 and less; stock cars, with road equipment—A. L. Kull (Ford), first; Charles E. Tyser (Cadillac), second. Time, 9:12. F. P. Libbey, E. P. Nussbaum and O. J. De Moll, driving Oldsmobiles, also started.

Ten miles, free for all; any motive power; stock cars, with road equipment—J. W. Boyd (Franklin), first; J. H. Edwards (Franklin), second. Time, 17:33. H. A. Rhine (Haynes), E. P. Nussbaum and F. P. Libbey (Olds), also started.

Facts About the Poughkeepsie Track.

How carefully the racing board of the American Automobile Association is safeguarding the interests of racing automobilists is evidenced by the fact that when a track, previously unused for motor car races, applies for a sanction, an investigation of its character and suitability is made. The track at Poughkeepsie, for example, where races are to be held on September 16, being unknown to automobilists, an official inquiry was made about it, and as a result the A. A. A. racing board has received from J. M. Booth, secretary of the Dutchess County Agricultural Society, a letter concerning the track which reads in part as follows:

"The track here is a regulation trotting horse course, one mile in circuit, eighty feet wide in the straights and sixty feet wide in the turns. The straights or stretches are a quarter of a mile long, and the turns are each a quarter of a mile in length. The track is banked more than such tracks usually are, having been built up a few years ago for bicycle racing. The turns are banked to a height of about five feet at the outer edge. The railing about the infield is three feet in height.

"The track was reconstructed several years ago by Mr. Jacob Ruppert with a bed of sod three feet in depth and a surfacing of loam and clay. The course is a part of the Hudson River Stock Farm, belonging to Mr. Ruppert, and is kept always in fine condition, perfectly level and free from both bumps and hollows. With the trotting cushion removed, the surface is as hard and smooth as asphalt. Local automobilists consider it an exceptionally safe track, and we are confident that the big, high-powered cars will on September 16 demonstrate it to be an exceptionally fast track.

"It has been decided by the committee to abate the dust evil on that day by having the track sprinkled with oil.

"Regarding its accessibility, trolley cars run from the Poughkeepsie depot of the New York Central Railroad direct to the gates."

Albany Programs Twelve Events.

Island Park track, Albany, N. Y., will be the scene of a big race meet on September 17, when the Albany Automobile Club will hold its first contest. The track is a mile circuit and the events have been sanctioned by the American Automobile Association. The programme is as follows:

Event 1—Motorcycle, five miles, free for all. Event 2—Steam cars only, two miles. Event 3—Air-cooled motors, five miles. Event 4—Free for all (any make, weight or horsepower), ten miles. Event 5—Gasoline cars, handicap, 881-1,432 lbs., five miles. Event 6—Gasoline cars, handicap, 1,432-2,204 lbs., five miles. Event 7—Gasoline cars, handicap, 551-881 lbs., five miles. Event 8—Time trials. Event 9—Club championship, open to members of the Albany Automobile Club only; five miles, handicap. Event 10—Runabouts (club members only), 551-881 lbs.; any motive power. Event 11—For machines weighing from 881 to 1,432 lbs.; any motive power; club members only. Event 12—For machines weighing from 1,432 to 2,204 lbs.; club members only.

A prize of a silver cup will be awarded to first and second in each event.

A. A. A. Approves La Roche Sanction.

At a regular meeting of the directors of the American Automobile Association, held on Tuesday, it was voted to approve of the sanction granted by Chairman Post of the tour committee to the non-stop-of-the-motor record run to St. Louis and back, made by F. A. La Roche. Chairman Post and President Whipple granted a sanction to La Roche for his run, after the racing board had declined to do so.

September Meet for Pittsburg.

On a date this month yet to be selected the Automobile Club of Pittsburg will hold a big race meet. It will take place on the Brunot's Island track, and an effort will be made to secure Kiser and Oldfield as the stars.

CLOSE FINISHES AT BALTIMORE

Labor Day Meet at Electric Park Furnishes Good Sport for Large Holiday Crowd.

A large holiday crowd turned out to see the automobile races on the half-mile dirt track at Electric Park, Baltimore, on Labor Day.

Some close finishes were made in the two-mile race for gasoline cars, after the first heat, which T. C. Goodwin, with a Rambler, won by nearly a quarter of a mile. In the second heat Zell, driving a Winton, won from Atkinson by a few inches. The final heat was so close that many thought it a tie.

The free-for-all also was close, Gill winning out by a few feet. The only accident of the day occurred in the free-for-all, when the steering gear of Robert Atkinson's Pope-Toledo broke while he was making a turn.

Summary:

Two miles, for gasoline cars—First heat won by T. C. Goodwin (Rambler); R. B. Bond, second; H. Gross, third. Time, 4:05. Second heat won by Stanley Zell (Winton); Robert Atkinson (Rambler), second. Time, 3:42 2-5. Final heat won by Stanley Zell; T. C. Goodwin, second. Time, 3:47 1-5.

Two-mile steam, handicap—Albert Kershaw, first; Howard Gill, second. Time, 3:23.

Two-mile touring cars—Mr. Dicky, first; Mr. Ashton, second. Time, 4:45.

Five-mile free-for-all—Howard Gill, first; Stanley Zell, second; Robert Atkinson, third. Time, 7:46 2-5.

Motor cycle exhibition—Charles Callahan, 5-horsepower Aster. One mile, 1:25; two miles, 2:47.

Sanction Asked for Philadelphia Meet.

Another race meet is on the cards for Philadelphia, to be held, as was the meet of last May, on the historic Point Breeze track. This time, however, it is the owner of the track, Hugh McAnany, who is back of the scheme. He has applied to the racing board of the A. A. A. for a sanction for September 24, and if it is granted he will go ahead with the meet.

Possesses the Pardoning Power.

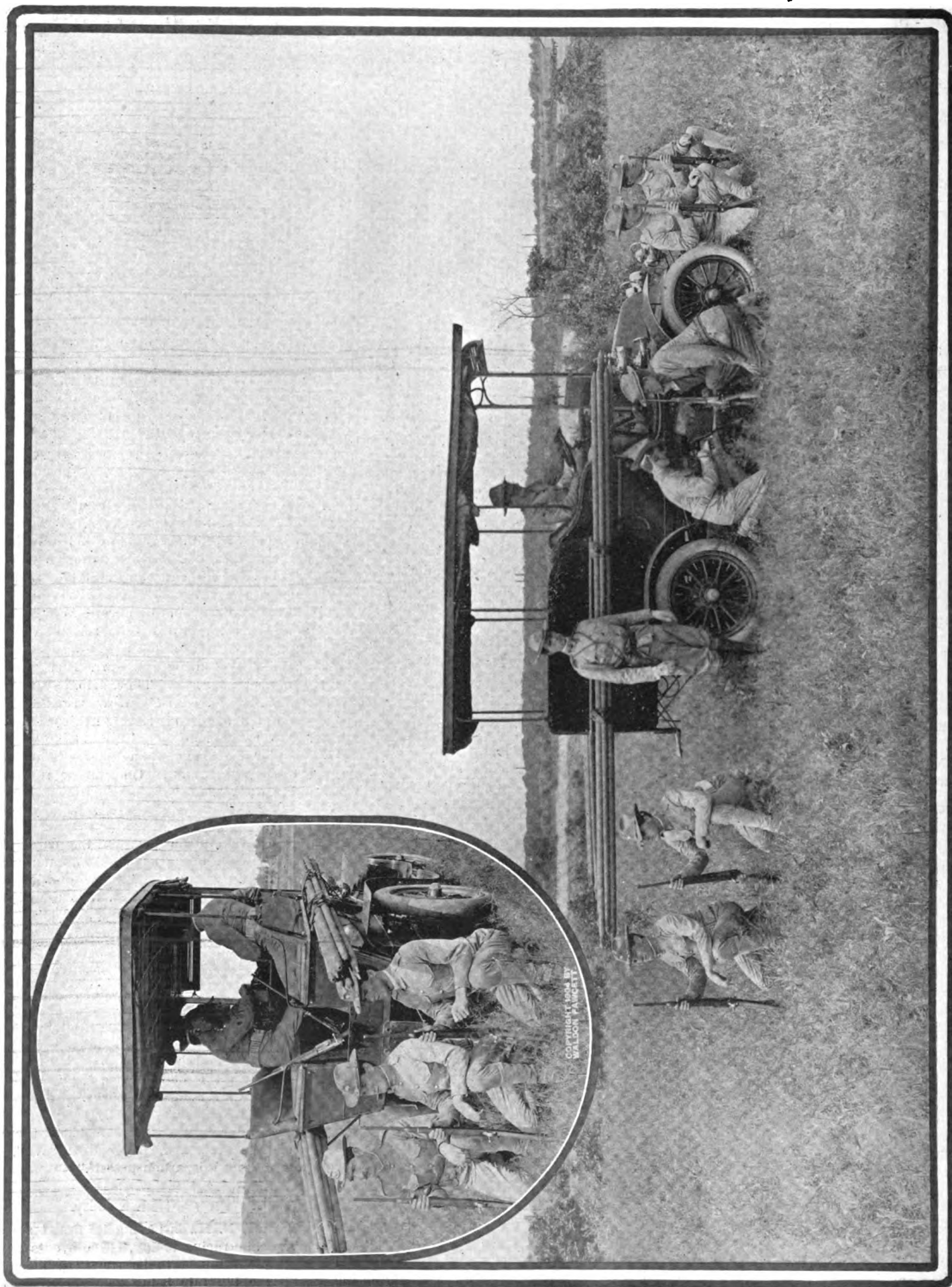
What a fine thing it is to be a Governor. One day recently Governor Herrick of Ohio was told that he had violated the speed ordinance in Cleveland's city parks.

"Have I," said he; "awfully sorry."

When told he would be arrested if the offence was repeated, he replied: "Well, if you jail me, I'll pardon myself."

Races at Nashua Today.

Nashua, N. H., is having its first taste of automobile racing to-day. Five events have been programmed to be run in connection with the big fair being held there, and a good entry list has been secured.



THE WINTON "SIGNAL CORPS TELEGRAPH AUTO CAR." IN USE BY THE UNITED STATES GOVERNMENT.

STREET CAR TRACKS TO GO

Within Next Five Years Automobiles Will Sweep Away Trolleys and Draught Horses.

"In the course of a few years there will not be a streetcar track in all New York." Such is the prophecy of a mechanical expert who has built and rebuilt more street railways than any man in this country.

The foregoing almost startling prediction was followed by this statement of facts, which tends to prove its probability: "Five years ago there were no automobiles. During the last twelve months our automobile output exceeded in value all the locomotives

of what periodically becomes obsolete, both in plant and equipment, the figures would show, at least for a large majority of American street railways, a loss instead of a gain during any ten years of recent operation.

Cars for the U. S. Signal Corps.

In these days of rapid movements, military needs require both expedition and preparedness. The commander in chief and his subordinates must be kept in touch at all costs, and a sure and ready means of communication is a necessity that no general can afford to be without.

The means for effecting this is possessed in the vehicle shown on the opposite page. It is one of two cars built by the Winton



MR. TAKAHIRA, JAPANESE MINISTER TO THE U. S., IN AN OLDSMOBILE.

built in America by \$20,000,000, and the industry is scarcely out of its infancy. The trolley car and draught horse will go together; there is no room in the crowded streets of our largest cities for either." . . .

"Owing," said this expert, "to the cost of changes in methods and systems which inventive ingenuity has, ever since the passing of the horsecar, been constantly forcing on the owners of street railways, it is doubtful whether as many as 5 per cent of these have been operated at a bona fide profit."

"In other words," he went on to explain, "I mean that if the cost of all the changes and new installations which have from time to time become necessary are added to losses due to wear and tear, and the abandonment

Motor Carriage Company for the United States Government, designed for the use of the Signal Corps.

One of the cars took part in the August manoeuvres on the Pacific Coast, and the other is participating in the Manassas manoeuvres in Virginia. The official title of the vehicles is "Signal Corps Telegraph Auto Car."

In the rear of the car is a table to hold telegraph instruments for two men and space for telephone, wire, shovels and other tools necessary to erect telegraph lines. The irons on the sides are for lances and digging bars. The car is shown in position, with its crew at work, the telegraph and telephone operator transmitting and receiving messages, and his companions in readiness to perform their share of the labor.

DOES AWAY WITH GUESSING

Ingenious Device Tells Motorists How Much Gasolene There is in the Tank.

A device which possesses extremely novel features and will, if successful, prove of great convenience to users of gasolene and steam cars, has been brought out by a Bridgeport (Conn) man, George W. Collins. This is a fluid tank indicator, and as applied to the tanks of automobiles it is an unerring guide to the amount of gasolene contained therein. Furthermore, it is always ready, being attached to the tank and proving an infallible telltale.

The indicator is permanently placed in the filling hole of the tank, and the dial of the indicator acts as a cap for the hole. The motorist looks at the indicator and can tell at a glance how near full or empty the tank is, and can act accordingly. It is adapted to any tank containing liquid of any kind, but is designed especially for automobiles of the types using gasolene.

The indicator is extremely simple in construction, consisting of a tube in which is a spiral shaft and a float. At the upper end of the spiral shaft is a magnet. This tube is screwed into a cap, vulcanized rubber separating the tube from the face of the indicator, so that there is no connection between the magnet and the needle pointer on the indicator. The action of the indicator is simple. The float rests on the surface of the fluid and as the tank is filled or emptied the float is raised or lowered. As the float cannot move laterally the spiral shaft which passes through a slot in the middle of the float is made to turn around by the action of the float up or down. The movement of the shaft and magnet is shown by the needle indicator, which is moved by the magnetic attraction.

This arrangement precludes the possibility of the vapor escaping, as the cap of the indicator replaces the filling hole cap and the indicator face has no connection, except the magnetic, with the interior of the tank.

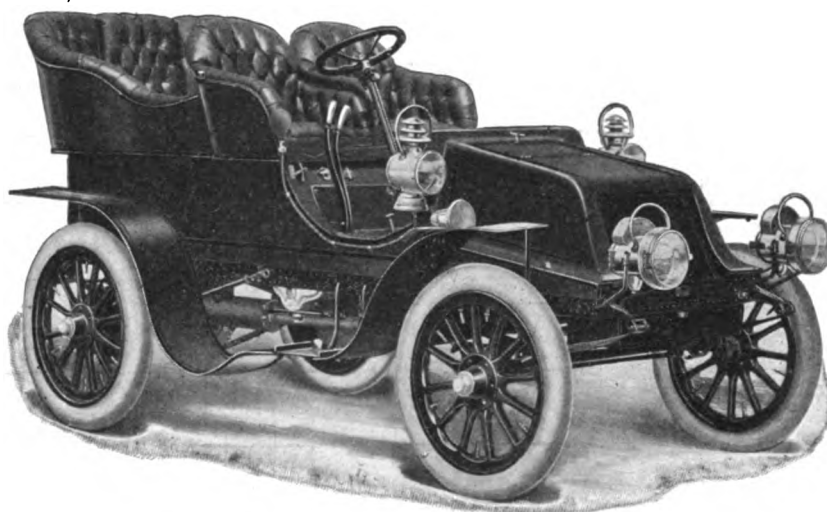
Will Test Scary Horse Case.

A test case of interest will come up at the October term of court at Norristown, Pa., through the appeal of Davis Garber, of Limerick Township, from the decision of Justice of the Peace Dreibelbers, of Royersford, who fined him \$10 and costs on Friday, on the charge of exceeding the speed limit.

The complaint was made by Andrew Relfsnyder, who alleges that his horse was frightened by the high rate at which the auto was travelling. Garber refused to pay, alleging that if the horse was scared it was because of its lack of intimacy with vehicles of this class, rather than by reason of unusual speed.

Fifty-three Saginaw (Mich.) automobiles have been licensed, under the new law, and the city officials believe that there is an equal number of delinquents.

WINTON



WINTON means SUCCESS

H. S. Blake, 14 years old, of Attleboro, Mass., had entire charge of his WINTON Touring Car during a 1500 mile journey, "most of it over the sandy and stony roads of Maine and New Hampshire. But for the bursting of a front tire, the whole trip was made without the delay of a single moment for repairs of any kind."

Young and old find the WINTON a rare delight.

\$2500 completely equipped; \$2300 without top;

f. o. b. Cleveland.

AGENCIES EVERYWHERE.



THE WINTON MOTOR CARRIAGE CO.

Member A. L. A. M.

CLEVELAND, O., U. S. A.

New York, Boston, Philadelphia, Chicago, London

NEW COAST TO COAST RECORD

L. L. Whitman Makes Trip from 'Frisco to New York in Thirty-three Days.

A new record for the trip by automobile across the continent from San Francisco to New York was established when L. L. Whitman, of Los Angeles, and C. S. Carris, of Syracuse, arrived in the metropolis last Saturday, thirty-three days, less forty minutes, out from the Golden Gate.

Whitman made the trip last year in an Oldsmobile in seventy-three days, and his experience on that trip served him in good stead this year. Whitman's trip last year was the slowest of the three first runs from ocean to ocean. Dr. Jackson, in a Winton, having made the pioneer journey in sixty-three days, while the record time was sixty-one days, made by E. T. Fetch, in a Packard. It was this record of Fetch's that Whitman set out to lower this summer, and he had the remarkable success of nearly cutting it in half.

Previous to last summer the possibility of an automobile travelling all the way from ocean to ocean under its own power was somewhat of a question, as several had tried it and failed. Then Dr. Jackson, Fetch and Whitman accomplished the feat in close succession. The performance of Whitman, just concluded, speaks eloquently of the general development of the automobile and its adaptability to American roads.

Whitman and Carris started from San Francisco on August 1, at 5 p. m., which is 2 p. m., New York time. They drove an air cooled car of 10-horsepower, and the first day they simply crossed the ferry to Oakland, from where they set out on the morning of August 2. Central Bridge, New York, was reached at 12.30 o'clock Saturday afternoon. By the route followed more than 4,500 miles were travelled, the average runs being nearly 140 miles daily. On several days more than 200 miles were covered.

Whitman and Carris officially terminated the journey at the rooms of the Automobile Club of America, at 1:20 p. m., where Whitman delivered to W. E. Scarritt, president of that club, a letter intrusted to him by R. P. Schwerin, president of the Automobile Club of California. Mr. Scarritt mailed an answer to Mr. Schwerin the same night, in which he said in part:

"Mr. Whitman has crossed the continent from San Francisco to New York in record breaking time. It is a marvellous performance, and I extend my congratulations not only to Mr. Whitman personally and to the builders of the car, but to the entire automobile industry everywhere.

"The question of speed, of economy, of comfort, of utility have long since been threshed out in automobiling. The question of reliability is the one remaining factor that disturbs us all. Such a triumphal journey

as that just completed by Mr. Whitman goes a long way toward the solution of this last vexed problem.

"Such trips as that completed to-day by L. L. Whitman and C. S. Carris are high water marks, which indicate the possibilities ahead of us."

The route of the transcontinental ride was across California to Wadsworth, Nev.; thence to Battle Mountain, then to the northern part of Utah, passing around Great Salt Lake, down to Ogden; from Ogden up into Wyoming, to Allen, down to Laramie, and then to Denver; from Denver through Nebraska to Omaha, then across Iowa and Illinois to Chicago, and from Chicago by the regular route to Toledo, Cleveland, Buffalo, Syracuse, Albany and down the west bank of the Hudson to New York.

The first day's run was a short one, to Oakland, Cal., and the last day's run was of only fifty miles, from Peekskill. The run on Friday was over the execrable roads from Utica to Albany, and thence to Peekskill, a distance of nearly two hundred miles. At Ossining the tourists were met by C. R. Seymour, and in Jerome avenue a large delegation of tradespeople were out to welcome them.

On the third day out from San Francisco the tourists reached the summit of the Sierra Nevadas, having climbed an elevation of 7,250 feet. On this side of the summit one drop of 1,200 feet was made in a mile. This was down a rocky trail, which furnished a difficult and exciting ride. They were six days in the deserts of Nevada and Utah, and many interesting stories are told of their experiences.

The chain of night stops across the continent consisted of: California: Oakland, Colfax, Truckee; Nevada—Wadsworth, Lovelock, Mill City, Battle Mountain, Wells Terrace; Utah—Ogden, Morgan, Fort Bridge; Wyoming—Rock Springs, Rawlins, Rock River, Fort Collins; Colorado—Denver, Orchard, Big Springs, Lexington; Nebraska—Grand Isle, Omaha, Fulton; Illinois—Chicago; Indiana—Elkhart; Ohio—Bryan, Toledo, Cleveland; New York—Buffalo, Syracuse, Utica and Peekskill. Stops of half a day or more were made in Omaha, Chicago, Toledo and Syracuse.

Over the Sierras more mileage was saved by following the line of the Southern Pacific Railroad, instead of going to Carson City. The ascents and descents were steeper, but less winding. In following a river bed through a Colorado canyon the Franklin became embedded in soft mud up to the hubs, and was hauled out by horses.

From Omaha a four hundred mile run was made to the Mississippi River without a stop, in order to get over the clay and dirt roads of Iowa before the fall of rain, which threatened. Fortunately little rain was had on any part of the trip, though as a consequence the dust was heavy throughout.

Ogden was reached in ten days, cutting the previous record exactly in half, and Denver in sixteen and a half days, as against the old mark of thirty days. The run to Chi-

cago occupied twenty-five days, as opposed to E. T. Fetch's record of fifty-one days. To New York the previous best time was beaten twenty-eight days.

The trip was not free from accidents and mishaps. A chain parted while in the West and a rear spring was broken by the wheels dropping into a ditch near Peekskill, but the delays were slight. Two tires were punctured west of Chicago, but no trouble was experienced from punctures in the East. The tire record was a remarkable one. One set of tires were used all the way from 'Frisco to Chicago, where a new set were put on, and these were in good condition when New York was reached. The two punctures were sustained from nails on fair roads. Diamond tires were used.

Near Spring Valley, Wyo., the car ran into a sunken pole that was hidden by tall grass, and both riders were hurled twenty feet or more into the grass covered road. Neither was injured nor was the machine damaged. Near Wadsworth, Nev., which they approached in the evening, the tourists were warned by a station agent not to stop in that vicinity because of many recent murders of travellers. Soon after the warning they were ordered to stop and put out their lights, but, paying no attention to the order, threw on high speed and raced into Wadsworth. Coyotes and wolves were frequently seen, while wild rabbits were their most frequent spectators west of the Mississippi.

No difficulty was found in obtaining gasoline when wanted, though for safety's sake supplies had been shipped ahead by Mr. Whitman to many places in the West. The only time he ran out of gasoline was within two miles of Toledo, but, borrowing a bicycle and tin can, he rode back to the city for a supply.

The worst roads encountered were those over the mountains, though Mr. Whitman says that east of Denver he found few stretches as bad as that from Utica to Albany.

Whitman and Carris carried little baggage, their policy being to throw away old clothing and buy new when they wanted a change. Their chief equipment consisted of an axe, a shovel and a rope, and all these were found useful. The longest day's run was of 325 miles from Cleveland to Rochester; the shortest day's run was of seventy-five miles in the Nevada desert. One day was spent at Ogden cleaning and overhauling, another day was similarly spent at Denver, and half a day at Omaha.

Germans Want Autos in Colonies.

Owing to the wholesale deaths from Texas fever of animals needed for transportation in the German colonies, the Berlin Colonial Society has decided to introduce an automobile service in the German over-sea possessions.

In order to obtain the best type of machine the society will open a competition, and a gold medal will be awarded to the most serviceable vehicle.

RAIN STOPPED RACES

Four Thousand Denverites Disappointed and Meet Postponed—Society Crowded Stands.

Denver, Col., Aug. 28.—More than four thousand people were rendered disconsolate at Denver, Col., yesterday afternoon by a heavy downfall of rain, which compelled a postponement of the races at Overland Park. Three events had been run, and the fourth was in progress when the rain came; it speedily turned the track into a quagmire and rendered the continuation of the meet out of the question. It was therefore called off, the announcement being made that rain checks would be given to those present which would admit them to the run-off. No date was selected for the latter, but it will probably take place early in September, dependent on when the track can be secured.

Society turned out in force to witness the races, and the grandstand was a blaze of light and color. Governor Peabody acted as one of the judges, while Mrs. Peabody entertained a box party. Lawrence C. Phipps and his children, who have been prominent of late, owing to the sensational kidnapping of the latter, appeared on the track with a retinue of nurses just as L. C. Phipps, Jr., was starting in the first event. His defeat in the event caused the children great grief.

The three events run were not productive of any very exciting sport, and before the Phipps Mercedes and the Stanley Comet, which were regarded as the stars, could prove their speed the rain began coming down in torrents. So badly was the track flooded that John P. Birdener, chauffeur for Lawrence C. Phipps, who was scheduled to handle the Mercedes, announced to the judges that it would be suicidal to continue the races. Accordingly, the announcement of the postponement was made.

Summary:

Five-mile non-professional, for stock gasoline cars, not over 12 horsepower—First, M. J. Patterson (Franklin); second, W. L. Hess (Ford); third, L. J. Phipps, Jr. (Autocar). Time, 8:08½.

Five-mile non-professional, for stock gasoline cars, not over 16 horsepower—First, A. E. Carlton (Winton); second, E. R. Cumbe (Rambler). Time, 8:55.

Five miles, for steam or gasoline cars, not over 24 horsepower, rigged to suit the operator—First, B. G. Campbell (Pope-Toledo); second, A. R. Wilfley (Peerless). Time, 6:11.

Novel Features for Empire Meet.

A programme of novel character, and one that promises interesting races, has been prepared for the race meet to be held at the Empire City track on September 24. There will be five regular events, besides special match races to be arranged.

One race will be at five miles, for the "Old Glory" cup, open to American touring cars, with regular equipment, carrying four people. Minimum weight for men, 150

pounds, and for women, 125 pounds. In this race the operator is required to crank the machine and then get in the car and cover the distance.

For the "International" cup there will be a ten-mile race among the winners of the trial heats. The heats will be at five miles, one race for each nationality. There will be a separate heat for American cars, for French cars, for Italian cars, for German cars and for English cars. The winners will meet in a grand final.

The third race is at ten miles, for the Knickerbocker cup, for cars weighing from 881 to 1,432 pounds.

On account of its being a success at every meeting, the Empire Handicap, at five miles, will be renewed. This race is open to all machines. It was captured once by a Peerless and on another occasion by a Cadillac.

For the small cars there is the Yonkers cup, for a five-mile race, open to cars costing \$1,000 or less. The machines to go with their regular equipment. Cups will be given to the second driver to finish in each of the races. Entries will close on Monday, September 19, with Alfred Reeves, secretary, 390 Washington street, New York.

From St. Louis in Six Days

A quick trip from St. Louis to New York was completed on Monday last by A. C. Halsey and W. K. Seaman, of St. Louis. They set out from the Exposition City on August 30 at 5 p. m., with the object of beating the time of seven days, made by F. A. La Roche in his non-stop run. Messrs. Halsey and Seaman stopped for rest at Indianapolis and Columbus, but after that drove night and day. They arrived in New York at 2 a. m. Monday, having completed the journey in five days and twenty-one hours. They used an air-cooled car of 10 horsepower, and their cyclometer showed 1,408 miles. They did not follow the national highway all the way, but turned off at Columbus to Cleveland and then travelled by way of Erie, Buffalo and Albany. By doing this they avoided the mountains, in which La Roche lost a night. Mr. Halsey claimed that he averaged a speed of 171.3 miles an hour all the way. Fisk tires were on the car, and except for one puncture they gave no trouble.

New Secretary for Bridgeport Club.

Dr. D. M. Trecartin has been elected secretary of the Automobile Club of Bridgeport, Conn., succeeding Dr. D. R. Beebe, resigned. Dr. Beebe made a very efficient official, but his business this summer has prevented his attending the meetings and he preferred to relinquish the office. Dr. Trecartin is one of the most prominent physicians in the city, as well as an ardent motorist.

Hartford Club Now a Corporation.

Articles of association of the Automobile Club of Hartford have been filed with the Secretary of State of Connecticut. The incorporators are J. Howard Morse, Leonard D. Fisk, A. W. Gilbert, Frederick S. Belden, W. T. Plympton and Thomas W. Hooker.

MOTORED UP MT. HOOD.

Two Portland Men Drive Automobiles Almost to Timber Line of Snow-clad Mountain.

What is said to have been the first automobile trip up Mt. Hood has been made by an Oregon motorist. Dr. C. B. Brown was the adventurous explorer, and he drove his White car to Government Camp and then to within two miles of the timber line.

Accompanied by his son, Hoyt Brown, his brother, J. M. Brown, and Dr. J. M. Yates, of Portland, Dr. Brown left that city on a Wednesday morning at 6 o'clock and met J. D. Kelley in his automobile at Pleasant Home. The five tourists, in the two automobiles, reached within two miles of the timber line of Mt. Hood at 5 o'clock on the same afternoon.

Good touring roads were met with up the Sandy to the postoffice and through Salmon to Toll Gate, but the hard work for the automobiles began at that latter point, because of poorly kept pathways.

After reaching Government Camp the tourists descended from the automobiles and walked to the top of Mt. Hood, reaching there Thursday afternoon about 1 o'clock. The air was very clear, and no trouble was experienced in doing full justice to the majestic view looking from Mt. Hood's eternal snows, but next morning the air was smoky, caused by a forest fire near Toll Gate.

Diamond State Motorists Organize.

Motorists of Wilmington, Del., and vicinity met last week and took the preliminary steps for the organization of an automobile club. Pierre S. du Pont presided, and Alfred R. Jones was secretary. A committee on organization was appointed, composed of Francis G. du Pont, chairman; John Evans, Horace W. Gause, William K. du Pont and William G. Menhinball.

An executive committee was named with these members: Alfred I. du Pont, chairman; Edgar M. Hoopes, Elmer E. Mitchell, Joseph Bancroft, Dr. Henry J. Stubbs, Alfred R. Jones and Pierre S. du Pont.

Another meeting will be held shortly, when a permanent organization will be effected.

Massachusetts' Tax on Dealers.

On January 1, when the license registration books of the Massachusetts Highway Commission closed for the year, there were exactly 100 automobile dealers enrolled. During this year 71 new ones paid the fee which a wise and generous State in a republican country singles out for imposition on a particular class of merchants.

Iowa Grants 759 Licenses.

Under the new Iowa law, which went into effect a few months ago, 759 licenses have been issued to automobilists. It is believed that this covers all the motorists in the State.

ANNOUNCES AUTOMOBILE ANNEX

League of American Wheelmen Will Seek to Add Motorists to Its Membership.

Although one of its ex-presidents, who earned a reputation and a fat salary when he filled the office, is now president of a national organization of automobilists—despite the fact that he himself is not one—and is acting as its local representative, what remains of the League of American Wheelmen

need numbers, votes, influence. We can give them very much of all these. This in brief is our plan. We think we can build up an automobile section as large as any independent organization now in the field. We shall antagonize no one. We offer a new force of workers. What do you think of it? If you will give us your ideas, and your half dollar, we will be helped in starting what we hope to make an effective organization. The League wants none of the money for its own purposes, and all that comes in will be appropriated to work in the interest of the new section."

INAUGURAL TRIALS FOR INDIA

Reliability Contest to be Held Over 880 Mile Course—Native Princes are Interested.

India will have its first automobile contests next Christmas, when the reliability trials, held under the jurisdiction of the Motor Union of Western India, will take place. The trials will be run from Delhi to Bombay, a distance of about 880 miles, over very stiff roads



NOT EN ROUTE TO THE COUNTY FAIR, BUT A PORTO RICAN MOTORIST DISPLAYING THE PRODUCTS OF HIS COUNTRY.

purposes to project itself into the field and establish an "automobile section." In its official organ the secretary explains the plan and the purposes to be served in this wise:

"Our scheme, which has been talked over and almost perfected by officers and interested members, looks to the formation of an automobile section of the L. A. W. Every member of the L. A. W. who owns an automobile and every member who is interested in the new vehicle, whether he owns one or not, should join it. A special ticket will be issued to all such. The members will elect officers, appoint committees, etc. The dues will be 50 cents and all of this, or very nearly all of it, will be appropriated to the uses of the section. The League has a complete establishment of officers, etc., and there will be no expenses in that direction. The automobilists

Pittsburg Club Has House Warming.

The handsome and elaborately furnished clubhouse of the Automobile Club of Pittsburg was formally opened on Monday night, when several hundred members and guests assembled at Baum and Beatty streets for the purpose of participating in the house warming. An abundance of refreshments was on hand, and vocal and musical entertainment was given.

The new clubhouse was erected at a cost of about \$10,000. The lower floor is given over largely to a garage and charging room. A pool and billiard room and a bowling alley are also being installed. The second floor consists of a large parlor, grill, smoking committee, assembly rooms, with all the accessories of an up-to-date club. The interior is beautifully finished in Flemish oak and handsomely furnished.

His Highness the Gaikwar of Baroda has offered a handsome cup for the automobile which goes through the trials with the least number of involuntary stops, and several maharajahs are offering cups for other tests. One of these cups will be reserved for the special race arranged for motor bicycles, tricycles and quadricycles.

The native princes are taking great interest in automobilism generally.

Not Enough Numbers to Go Round.

An odd predicament confronts the Paris police. The number of automobiles in Paris having reached 15,000, the police find a difficulty in numbering and properly classifying them. In the alphabetical series 999 are apportioned to each letter, but if the increase continues, another method must be devised.

FLANGES WERE FAULTY

Glidden Party Delayed Ten Days Replacing Them—Now Gliding Over Western Railways.

When it became known, some weeks ago, that a set of steel flanged wheels had been constructed for the car which Charles J. Glidden is using on his around-the-world tour, surprise was felt. It was asked how the Lowell man expected to obtain permission to use the tracks of the different railroad companies; while, on the other hand, it was obviously out of the question to attempt to use them without permission.

It transpires that permission was asked of a number of railroads, nearly all of whom, however, refused with more or less courtesy. Two companies gave the required permission, viz., the Soo and the Canadian Pacific lines, the others refusing point blank or asking preposterous prices for the privileges. Some of the replies received by Mr. Glidden were amusing, others sarcastic; that from the Canadian Pacific officials was businesslike as well as satisfactory, as the following extract shows:

"We are willing to enter into a contract with you upon a fair basis, to run your automobile upon our tracks between any points desired, provided your car with its railroad wheels passes the inspection of our master mechanic. We will move you along at any speed desired that is considered safe, under the personal direction of a conductor, who will receive his orders from the train dispatcher, the same as any irregular train that is run upon the road. These orders must be strictly obeyed and great care taken to prevent accidents or delay to the traffic."

Some of the other replies are equally interesting, although for different reasons. A few of these are quoted by Mr. Glidden, who has been in correspondence for more than a year with the various companies:

"I would not have you on our tracks at any price."

"Yes, you may have the use of our rails from — to —, under restricted conditions, at \$2 per mile."

"Such a permit would establish a precedent that we never could live down."

Mr. Glidden replied that whenever any other person applied for the privilege with a record of 30,000 miles, they could well afford to consider the application.

"We are not prepared at this time to turn our property over to automobilists. They already control the highways of the country," said another.

To this Mr. Glidden replied: "The time is not far away when you will advertise to rent your rails to motorists in sections where highways do not exist, and from such will derive a handsome revenue."

The president of a large trunk line said:

"Our traffic is now very heavy, and it would be difficult to find room for you, small as you are. Then, again, you run so

easily and not being expected at road crossings, accidents would be the result. There is a highway between — and — better for your automobile than our tracks would be between the same points. Application respectfully declined."

By this time the party is making its way to the Pacific Coast. A ten days' delay was caused by the necessity for re-tiring the steel wheels, the flanges not being the proper size or shape. Previous to starting, the car was exhibited in the Transportation Building at St. Louis, and there it came in for considerable unfavorable comment and criticism by the railroad men in attendance upon the exhibits the instant it was transferred from rubber-tired wheels to the steel-shod wheels intended for use on the tracks. A veteran engineer said:

"My boy, those narrow rims and flanges will jump the frogs and switches, endangering your life and wrecking the car."

Having had no experience with railroad frogs, except to glide over them in a Pullman car, the situation was not fully appreciated by Mr. Glidden, but the experiment upon the tracks revealed the force and truth of the veteran's statement.

On the straight track and curves at moderate speed the car held the track smoothly, but the first frog caught it, one wheel taking the wrong track—the result being a leap from the irons and a sprung axle for the car. The rims were about 1½ inches short of the standard, and the flanges fully 1 inch short, the gauge and wheels perfect. The error of the English mechanics caused ten days' delay, while the wheels were shipped to Burnham, Penn., to be re-shod with the proper steel-rimmed, flanged tires.

The final arrangements contemplate journeying from Minneapolis over railroad tracks to Portal across North Dakota, 560 miles on the Soo Line, and 1,251 miles on the Canadian Pacific to Vancouver on the coast.

Fifty per cent Extra Toll for Autos.

An idea of the outrageously high-handed methods of some of the turnpike companies is afforded by the reported experience of a Philadelphia dealer. He says:

"On a trip to Paoli, seventeen miles, I paid thirty-five cents toll for going out, and when I started to return with a disabled car in tow, the keeper of Toll Gate No. 9, at Paoli, informed me that to return it would cost me eighty-four cents. I naturally wanted to know why, and was told that he had received instructions to add fifty per cent. more than the regular toll and make that charge for automobiles. I refused to pay the toll, preferring to take a longer route home than submit to the extortion."

Paterson Club's New Officers.

At a meeting of the North Jersey Automobile Club, of Paterson, recently, the following officers were elected: President, G. A. Post; first vice-president, F. R. Reynolds; second vice-president, Frank Van Cleve, jr.; secretary and treasurer, Robert Beattie, jr.

PLAYS THE POLYTONE

London Motorist Produces Horn with Four Notes—Pedestrians Stop and Listen.

London is agog over the Polytone, an ingenious arrangement of automobile horns which Moffat Ford, a well known English motorist, has rigged up on his car and is trying on the British public. The latter is fittingly astonished. It listens in amazement and then grins broadly as the novel sounds are heard.

The Polytone is composed of four little horns, two on either side of the car, which are played by pressing buttons on a dial attached to the steering post. The effect is that of a post-horn. The driver of the automobile can indulge in all sorts of improvisations without any apparent motion. Instinctively everybody on the street, when the horn blows, turns, expecting to see a four-in-hand.

Every man, woman and child who heard the tones of the horn first gazed in astonishment, then broke into a broad grin. There were loud calls for "Bill Bailey," "Hiawatha" and other classical tunes, but Mr. Ford has at present only four tones and refused to try anything more complicated than "There Is a Happy Land."

"Anything that makes the people laugh and at the same time is useful ought to succeed," said the inventor as a serious hobby near the March forgot his dignity and guffawed loudly as he tooted by.

The new horn will be technically known as the Polytone. It has not been put on the market yet, nor is it known just what the invention will cost. It will not be a toy for the masses, however, for its price will be in the neighborhood of \$60. The power is supplied by a pump attached to the rear wheel. It can also be worked by foot with a bellows in the tonneau.

Mr. Ford has only five notes on his automobile at present, four for musical purposes and a bass tone from the regular horn. There would be no difficulty, however, in having the whole octave.

The remarkable feature of the invention is the soothing effect it has on pedestrians. The usual automobile grunt for people to get out of the way breeds bad temper, but the pleasant tones of the polytone invariably bring out a smile that doesn't wear off until the automobile is out of sight.

Colorado to Have \$80,000 Speedway.

The automobile boulevard planned to run from Colorado Springs, Colo., to Denver will be eighty miles in length and the approximate cost will be \$1,000 a mile. No carriages will be allowed on the new road, it being intended for a speedway only. North of Colorado Springs, about thirty miles, the boulevard will cross the Divide. From this point a magnificent view will be commanded of Long's, Gray's and Pike's Peak.

CHILDREN BY THE CARLOAD

Thirty-Six Youngsters Swarm into Two Wintons and Enjoy Themselves Hugely.

There was just enough space to go around, hence the smiling, happy faces in the two illustrations here shown. The cars are Wintons. The top one belongs to A. S. McWhar-

ter, of Omaha, Neb., and it contains, in addition to the six adults, exactly twenty-three hilarious youngsters, who were at a children's party at Mr. McWharter's residence when the happy thought seized that gentleman to give them a ride in his automobile. Had it not been for the canopy, there might have been some disappointed ones.

Woman Drives up Court House Steps.

Step-climbing in automobiles has ceased to be anything extraordinary, but the performance of a San Francisco, Cal., woman



is worthy of more than passing attention. While in Bakersfield, Cal., recently Mrs. Linz, one of the Golden Gate city's most experienced chauffeurs, demonstrated her ability to handle a car by driving the machine up the court house steps.

The feat was witnessed by a great crowd of spectators. The machine used was a Rambler 8-horsepower runabout. Mr. and Mrs. Linz started the ascent together. When half way up the brake was set, and Mr. Linz got out. His wife then continued the ascent. Arriving at the top, the machine was reversed and backed down safely.

BALKED AT THE PRICE

Visitor Thought \$25 too Much for Auto Ride and Dinner at Manhattan Beach.

"I always supposed that motoring was an expensive pursuit—the sport of millionaires, as it were—but until to-day it was never borne in upon me forcibly," remarked a New-York visitor to a Motor World man recently.

"Happening to be in the neighborhood of the Waldorf, I dropped in to look around. An attractively gotten up placard referring to an automobile ride to Manhattan Beach attracted my attention, and I followed its suggestion and applied at the desk for further particulars. I was told that the automobile made regular trips to the famous resort, carrying its patrons to the Oriental Hotel, where a dinner formed part of the program. The 'tariff' for the evening's entertainment was only \$25 per head!

"This staggered me, I confess. I had thought of taking my wife, who is with me, and enjoying the recherche little outing. But \$50 was a little too much for my pocketbook. Now I wonder how the \$25 charge is apportioned. The dinner, even at the Oriental, can't well be more than \$5. That leaves \$20 per head for the automobile trip. As the machine seats six or eight people, there is a tidy bit of profit in it for some one. But automobiles come high, I suppose, especially at the height of the season, and they have got to be paid for somehow."

More Cars Appear in Moscow.

"In spite of the bad paving the number of motor cars in Moscow would seem to be increasing," says the British Consul in the ancient Russian capital, "and as there is to be improved paving laid down as the conversion of the tramway system advances there will probably be a further increase in the number of cars. Some of the wealthy people also have cars on their estates, though the condition of the country roads is generally very poor."

So far the Consul has not seen any British makes, but only French and German, with a few Russian, but British cars are usually bought and imported direct. Although cars are now to some small extent made in Russia, the more delicate parts are still imported from abroad. The Consul advises British manufacturers to send the parts separate from the body of the car, as by this means customs charges are saved.

Auto 'Buses for Ceylon.

The Ceylon Government is said to be seriously considering a proposition to substitute light-running automobiles on all roads able to bear the strain, in place of the old coach which is still in existence on some important roads for the carriage of mails and passengers. The speed stipulated is thirty miles an hour, and each car is to carry six passengers and three hundredweight of mails, besides half a hundredweight of luggage.

ELECTROLYTIC WATER JACKETS

Interesting Particulars of this Latest Method of,
[Constructing Copper Fluid Containers.]

Further particulars of the process of electrolytically-forming water jackets appear to bear out the impression that it will, when a little further developed, prove entirely successful. The English concern which is pushing the process is making headway, several Napier cars—including the six-cylinder racer—having recently utilized it.

Copper jackets have hitherto been fitted with the object of reducing the weight of the engine and of enabling the cylinder walls to be machined both inside and out, in order to insure an equal thickness of metal; but hitherto they have been made of sheet metal, and a certain amount of difficulty has been experienced in forming a water-tight joint between them and the cylinder itself. With sheet-metal jackets, too, it is difficult to provide for any irregular shapes, and hence the majority of these jackets have been circular, and have merely surrounded the wall and not the head.

By the electrolytic process, however, the jacket required can be made of any external shape, and can be formed around a cylinder of any required form. In fact, the jacket can be constructed around a casting forming more than one cylinder. The cylinder itself is, in the first place, coated with a deposit of copper in the electrolytic bath, and this coating in reality forms the inner side of the jacket, which when finished is a complete watertight bag as distinct from the cylinder itself. After this preliminary process that portion of the cylinder around which the jacket is required is covered with wax to a thickness equal to that of the water space needed, but at those points where the outside of the jacket is required to join the cylinder the original copper plating is left bare. The wax is thoroughly coated with plumbago to give it a conducting surface, and the whole cylinder is then again placed in the "plating" bath, and the electrolytic action continued until a sufficient thickness of copper has been deposited over the surface; the wax is afterward melted by heat and allowed to run out. In order to avoid porosity or brittleness of the deposited copper a low current density is used when commencing the plating process. It is claimed that the completeness of the copper jacket in itself obviates any troubles that would otherwise arise from unequal expansion of the jacket and the cylinder, and it is said that if the jacket is given a suitable corrugated shape externally, a thickness of metal of about one-fiftieth of an inch is sufficient for practical purposes. Jackets of this thickness have been tested to a pressure of 80 pounds per square inch, showing no signs of defect; and tests, too, have been made of allowing the cylinders to get hot with a dry jacket and of then admitting cold

water under very much more severe conditions than would arise in practice.

The weight of the jacket thus formed is apparently no heavier than if made from spun or rolled sheet metal. It is pointed out, too, that bosses projecting from the cylinder to the outside of the jacket do not interfere with its formation, since it builds itself up around them, and there is, therefore, no difficulty in making any water-joints. In certain cases, however, a method of reinforcing the joint around the boss is adopted so as to render it better mechanically; this, for instance, is done where the ignition plug is fitted, because the plug is liable to be frequently removed and replaced, and this operation might ultimately damage the copper jacket.

When a Patch Comes Loose.

It will sometimes happen that a tire will become partially or even entirely deflated without apparent cause—that is, without any nail or other puncturing instrument being visible. If you have had experience with occurrences of the kind, you will immediately suspect a loosened patch and proceed to verify your suspicions. Partly inflate the tire, and your ear will tell you whereabouts the leak is. Only remove as much of the cover as will enable you to conveniently attack the job. You will very likely find that, although the air has burrowed a small channel between the patch and the tube in one place, other portions of the patch are holding on tenaciously. Why they do not stick all over alike is what no one ever could understand.

A drop of gasoline applied with care does wonders in persuading the patch to peel off, and afterward in cleaning the surface of the tube; but do not apply the solution until you have well roughened the place with sandpaper. Put the old patch away for future use, and apply a fresh patch, two coats of solution, spread on thinly, and well rubbed in, especially the first (you cannot rub the second coat hard, or the lot peels off); squeeze the patch and tube together as hard as possible with finger and thumb, beginning in the centre of the patch and working out to the edges. You may hold a block of wood under the tube and beat the patch with a hammer, if preferred, but go gently. One motorist belabors his patches unmercifully, and says they never come off. Judicious beating does no harm, and screwing up in the vise between two pieces of wood, and leaving all night, also works wonders.

Arraigned for Raising the Dust.

The well-known French racing motorist, Baron de Caters, met with a curious and unpleasant experience. Arriving at Theresienfeld, Austria, recently, his car and another were stopped by an imposing group, consisting of the Mayor, the council of the village and the whole body of the local police, and the motorists' names were demanded, in order that summonses might be issued against them for raising the dust while driving through the town!

EARLIEST COMBUSTION ENGINE

Was a Cannon with Valves and Using Gun-
power—Turpentine Vapor Next Tried.

The earliest form of the internal combustion engine was, undoubtedly, the cannon. This engine of warfare exemplified a fairly efficient and scientifically accurate method of utilizing the latent energy in gunpowder for a specific purpose. In 1680 Huygens, the celebrated Dutch contemporary and rival of Newton, proposed using gunpowder in an engine for obtaining work, and ten years later Papin continued Huygens's experiments by exploding small quantities of powder in a vessel having escape valves, and in utilizing the resulting partial vacuum as a means of obtaining work. The results were naturally unsuccessful, and in themselves the experiments were based on a principle antagonistic to that of the successful cannon in which the gunpowder is burnt under pressure.

A century later—in 1794—Street proposed the use of turpentine vapor in an engine, on lines similar to those subsequently successfully adopted by Lenoir in his gas engine. Street's engine failed through faulty construction, and nothing more was done until Brown in 1823 reverted to Huygens's residual vacuum experiment, but with no better success.

Ten years later Wright made a workable gas engine, but it was Barnett in 1839 who made the greatest advance of any worker in that field by adding the initial compression of the gas to the methods adopted by Wright. There is no doubt that Barnett deserved commercial success, but apparently his mechanical skill, or more probably his financial means were at fault, and the opportunity was lost. In 1860 came Lenoir, who, by means of greater resources, made the inferior non-compression engine a financial success.

After this stage in the history, such names as Beau de Rochas, Otto, Priestman, Daimler, Dugald, Clerk and others naturally suggest themselves.

Long Wheel Bases and Cold.

One defect of side entrance cars, with their longer wheel base, has been noticed by an observing motorist. In these cars with the long back body, he says, the rear seats are very much colder than in the shorter vehicles. When one shifts from the front to the back seats of a car of medium wheel base, one at once notices how much more sheltered the rear seats are, but when the change is made on a long base car, with the rear seats some two feet or more further back, there is really not much difference. This, of course, refers to open cars.

THROTTLE AND CLUTCH DRIVING

Factors Which Determine Their Use—Economical and Mechanical Superiority of Former.

Whether a car should be driven on the throttle (that is, keeping the clutch in and regulating the pace by means of the throttle and the advancing and retarding of the spark) or on the clutch (taking the clutch in and out according to the exigencies of the traffic) depends to a very great extent on the number of cylinders there are to the engine propelling the car and the horsepower of the engine compared with the total weight of the car and passengers to be moved, and the highness or lowness of the gear, says *Motoring Illustrated*.

In the case of a high speed, ungoverned engine, the power usually developed by such when running at a low speed is not sufficient to enable one to raise or lower the speed of the car in traffic or on the ordinary roads of the country by opening or closing the throttle alone—that is to say, the car is usually underpowered for this class of work, excepting on the low gear, and the engine has no "picking up" qualities on the higher gears, hence of necessity one must drive to a large extent on the clutch, coupled with frequent gear changing to suit the various conditions of traffic or roads. Immediately the clutch is released on this type of engine, a racing of the engine follows, and, as to a very large extent an increase in engine speed means an increase in power developed, a proportionately greater propelling effort is at one's command to move the car when the clutch is let in. There is the disadvantage that the movement of the car is not uniform, but is of the "by fits and starts," or kangaroo nature.

On the larger cylindered, slower running engined cars, where a heavy flywheel of large diameter is employed, the motion is more uniform, and either the throttle or a clutch allowed to slightly slip may with equal advantage be employed, as the reserve of power is fairly high and the propelling effort steadier. When the car is geared fairly low much better results are obtained, there not being the necessity for constant gear changing, and the engine has then a chance to "pick up" speed on the throttle only; usually with a judiciously geared car a better average speed can be maintained, because a greater percentage of the running can be done on the top gear. This is known as an elastic motor.

When the higher powered engines, having a greater number of cylinders, are employed, the control can, with advantage, be entirely on the throttle, providing the ignition is not advanced too early for the slowest running that may be desired. With an increase in the number of cylinders, when fired alternately, the turning effort becomes more uniform, therefore the movement of the car will be less jerky, and, as a larger margin of

power can be given by the designers, the engine will pick up from its lowest speed with certainty when the throttle is opened. Furthermore, a governor is usually fitted on the more powerful and expensive vehicles, and this prevents the engine from racing when the clutch is taken out of action, so that in changing gears in ascending hills it is not necessary to increase the engine speed to give the power required; but the gear can be changed with the throttle partly closed, and, after letting in the clutch, the throttle can be opened, so that the car maintains the same speed or increases in speed without any jumping or shock.

Working on the throttle is more economical as regards gasoline consumption, and less strain is put on the engine, clutch, gears and wheels than when working on the clutch, the car and engine are more readily controllable, and a decided advantage is obtained in traffic by the ability the driver possesses in being able to keep his place uniformly in the line of vehicles, or to quickly pass a slower vehicle when so desired. A vehicle can be run much more silently, and by this alone the prejudice of a number of the public against motor vehicles is considerably reduced, a desideratum that all motorists wish for.

Sprag with Four Contact Points.

If the brakes of a car are properly looked after, and periodically inspected and given needed adjustments, a sprag would appear to be an unnecessary fitting; yet many motorists believe that a sprag should always be provided, especially with heavy cars.

A transatlantic device is claimed to be free from the disadvantages usually attending sprags. It is a double sprag, each bar being provided with two ends, giving four contacts with the ground, so shaped that they will dig instantly into the road. They are both free to swing on one bearing, and a short length of chain holds them the proper distance apart. They are constructed of bicycle steel tubing, of large gauge; the ends, of course, are solid, and are brazed on.

Three Tools in One.

One of those handy articles, a combination tool, which appears to be without the usual disadvantages of such tools, has been brought out by an English concern. It is three tools in one—a lifting jack, a drill and a vise. Although it weighs but 11 pounds, it combines in one a jack capable of lifting two tons, a vise and a drilling machine, besides being adaptable to many other purposes. It will thus be seen that he has effected a great economy of storage room for motorists.

The device will also draw gear wheels, bend or straighten tubes, or hold them, and, when stowed in the tool box, is only eleven inches in length.

A calculation of the automobiles in use in Italy gives the number as 1,870. Most of these are of French make.

CONTACT SCREW ADJUSTMENT

Its Importance on Battery Life and Service—Many Pulsations Unnecessary.

"Although it is not properly appreciated," says William Roche, the battery maker, "the adjustment of the contact screw that completes the circuit of the coil through the vibrator has not a little to do with the life and service of a battery.

"The proper adjustment is that which permits the vibrator to move at as slow a speed as possible, and yet allow enough 'spark' to explode the gas or mixture. Any logical person can readily understand that every time the vibrator is withdrawn from the contact screw, a certain amount of current is taken from the battery. Therefore, if two or three pulsations (at slow speed of vibrator) are sufficient to ignite the gas, it is obvious that to use six, ten or twenty pulsations is unnecessary, and only serves to shorten the life of the battery.

"By way of illustrating this point I recently called on a friend who complained of the short life of his battery, and was surprised to find the contact screw of the vibrator screwed in as far as it could be turned without short-circuiting. The battery was nearly used up at the time. I turned the screw out to a slow speed, and as a result, although running ten hours a day, the battery that was nearly exhausted lasted about twenty-seven working days before it finally gave out. My friend now watches the vibrator of the coil quite as much as any other part of his engine—possibly a little more.

"Another cause which has to do with the life of a battery and which receives very little attention, is the length of time the make and break mechanism is in contact. This ranges all the way from an almost instantaneous contact to one which lasts one-third of a revolution of engine shaft; and as the consumption of current increases as the square of the time the 'circuit' is closed, it is obvious that the shorter the time of contact the better for the life of the battery. This, however, can be carried to an extreme, and the contact may be too short to allow the current time to flow and produce a good spark. From experiments along this line, it has been demonstrated that the time of contact should be about one twenty-fourth of a revolution of crank shaft for slow speed engines, and about one-twelfth for high speed engines. This, if the contact points are clean, will give a good 'fat' spark and use a minimum of current."

Pawl and Ratchet Stop.

An excellent substitute for a sprag consists of a pawl and ratchet on the driving wheel. It has been fitted to a French car. Dropping the pawl into position effectually prevents the car from running backwards, no matter what the surface of the road is like.



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Nearly 50 per cent. of our nearest competitors' tires
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Such a record speaks volumes and gives to the

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DETROIT, 80 E. Congress St. SAN FRANCISCO, 392 Mission St.
LONDON, E. C. 7 Snow Hill.

The Week's Patents.

768,158. Governor for Gasolene Engines. Daniel C. Stover, Freeport, Ill. Filed March 22, 1904. Serial No. 199,474. (No model.)

Claim.—1. In a governor for gasolene engines, in combination, a supporting frame, a main shaft mounted therein, a governor gear, splined on the main shaft to move endwise thereon and having a peripheral groove in the hub thereof, a balance wheel fast to the main shaft, two bell cranks pivotally mounted, at their angles, on bearings supported by the balance wheel, and having their inner arms projecting into engagement with the groove in the hub of the governor gear, and their outer arms provided with governing weights secured to their free ends, a gear wheel, meshing with the governor gear and mounted on a bearing on the main frame, a cam carried by the hub of the gear wheel, a rocking arm mounted, at its lower end, on a pivot bearing on the main frame and provided, at its upper end, with jaws, and having a locking recess therein, a roller mounted between the jaws of the locking arm and having its periphery contacting the cam on the hub of the gear wheel, means for maintaining the roller in engagement with the cam, a detent, mounted on a stationary pivot bearing and adapted to be swung thereon alternately into and out of engagement with the locking recess in the rocking arm, and provided with an arm carrying a roller contacting the outer face of the governor gear and means for maintaining such roller in contact with such governor gear.

768,180 Galvanic Battery. Alex. J. Jacobson, Hamburg, Germany. Filed March 19, 1903. Serial No. 148,620. (No model.)

Claim.—A galvanic battery constituted by a plurality of dry cells, thereby characterized that the dry cells are provided at one end each with an opening or entrance capable of being locked or closed by a suitable cover and that the rim or edge of such opening is furnished with a suitable insulating means, in order to admit of the filling in of the electrolyte shortly before the use of the battery and without effecting any short circuit by any overflowing electrolyte, substantially as and for the purpose set forth.

768,278. Pneumatic Tire. George H. Hastings, Oporto, Portugal. Filed November 8, 1902. Serial No. 130,620. (No model.)

Claim.—1. In a device of the type set forth, the combination with the inner covering of a pneumatic tire, of continuous, flexible securing bands of gut, said bands, comprising a plurality of strands having their joints broken and their ends secured together in overlapping positions whereby a continuous securing means is formed, substantially as described.

768,372. Electric Battery. Pierre J. Kamperdyk, New York, N. Y. Filed October 14, 1903. Serial No. 177,021. (No model.)

Claim.—1. In a primary battery, a cell comprising a containing vessel, two or more porous cups therein, and passages connecting said cups to allow the liquid therein to flow freely from one to the other to insure equal density in each.

768,374. Starting Device for Explosion Motors. Charles R. B. Keetley, London, England. Filed December 31, 1903. Serial No. 187,289. (No model.)

Claim.—1. In starting devices for explosion motors, the combination with a motor driven shaft, a revolvable starting shaft, bearings for supporting the same, and means for connecting the starting shaft with the motor-driven shaft in one direction of motion and

for allowing the motor-driven shaft to overrun the starting shaft; of a framework fixed to the starting shaft in a plane at right angles to the axis thereof, and having a grooved circular periphery, and a projection on the frame adapted to hold a loop formed in one end of a cord which is placed in the circular groove of the frame and is to be pulled by hand to revolve the frame and the starting shaft, the said cord being released from the projection at the termination of the angular motion of the frame, substantially as set forth.

768,436. Vaporizer for Internal Combustion Engines. Charles J. Everett, New York, N. Y. Filed November 20, 1902. Serial No. 132,076. (No model.)

Claim.—1. An internal combustion engine comprising a cylinder, a piston fitted to reciprocate therein, a valve box in open communication with the cylinder, inlet and exhaust valves for the valve box, a vaporizer located above the valve box in position to drain the excess hydrocarbon into the valve box and not into the cylinder and means for injecting the liquid hydrocarbon into the vaporizer.

768,460. Multiple Cylinder Engine. Edward A. Jones, Fiume, Austria-Hungary. Filed January 12, 1904. Serial No. 188,710. (No model.)

Claim.—1. In multiple cylinder engines, in which a number of connecting rods act on a single crankpin the connection of the connecting rod heads with the crankpin, consisting of an annular slideway running on both sides of the pin and concentrically therewith and recessed for the admission of the rod heads, and in which the connecting rod heads are guided and means for closing the slideway, substantially as described.

768,495. Grip Tread for Pneumatic Tires. Harry D. Weed, Canastota, N. Y. Filed February 9, 1904. Serial No. 192,803. (No model.)

Claim.—1. A grip tread for elastic tires comprising side chains flexible in all directions whereby they may be reversed side for side, interlocking members on the ends of said chain, and cross chains having their ends secured to the side chains and their inner and outer faces similar whereby either face may be placed against the tire.

768,506. Gas Engine Starter. Gustus S. Billman, Indianapolis, Ind. Filed August 24, 1903. Serial No. 170,589. (No model.)

Claim.—1. An automatic starter for explosive engines including a driving shaft, a counter shaft, two parallel sets of gears connecting said shafts, one for actuating the counter shaft from the driving shaft and the other for actuating the driving shaft from the counter shaft, a spring on said countershaft for driving it, a sliding clutch on said driving shaft between said two sets of gears for operatively connecting either one of them with the driving shaft, a pin extending from said clutch, a bar between said two sets of gears, means actuated by said countershaft for reciprocating said bar, and a tongue connected with said bar and extending in the path of the pin from the clutch, the ends of said tongue being beveled to throw the pin and clutch alternately in opposite directions.

768,515. Motor Vehicle for Running on Roads or Rails. Albert Collet, Paris, France.



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1904 Stanley for sale, price \$665; never been used. H. H. NESBITT, Lawrence, Mass.

FOR SALE—White Stanhope, as good as new; run since March 1st, 1904; price low. H. E. RAMSEY, 713 Arch St. Allegheny, Pa.

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Filed February 6, 1904. Serial No. 192,260. (No model.)

Claim.—1. A motor vehicle, having a frame, an axle movable up and down in said frame, ground wheels rotatable on said axle, means for moving said axle up and down in the frame, and flanged track wheels on said frame for operating the vehicle on track rails when the ground wheels are elevated, substantially as and for the purpose set forth.

768,527. Steering Apparatus for Automobiles. Harry E. Hoenig and Walter A. McCullough, Rochester, Pa. Filed November 3, 1903. Serial No. 179,717. (No model.)

Claim.—In a device of the type set forth, a frame having downwardly extending brackets at its end extremities, extending below said frame, an axle journaled in said brackets, horizontally arranged brackets formed integral with said downwardly extending brackets and disposed above and below said frame, bearings journaled between said horizontal brackets and resting on the lower thereof, L-shaped arms secured to said bearings extending downwardly to align with said axle, wheels supported in said L-shaped arms, a universal joint connection between said wheels and axle, and lying between said downwardly extending bracket and said L-shaped arms, rods passed through the bearings and extending outwardly from the frame, said rods having threaded portions with nuts thereon bearing against opposite sides of the bearings, a connecting bar secured to said rods, a bracket on the frame, having a shaft therein, with a crank connected to said bar and said last named frame bracket.

768,636. Driving Mechanism for Self-Propelled Vehicles. Elihu Thomson, Swampscott, and Herman Lemp, Lynn, Mass., assignors, by direct and mesne assignments, to General Electric Company, a Corporation of New York. Filed Oct. 22, 1902. Serial No. 128,283. (No model.)

Claim.—1. In combination, a vehicle body, axles therefor which are movable toward and away from each other to a limited extent, springs which unite the body with the axles, a gear wheel mounted on one axle, a second gear, engaging therewith, a motor mounted on the spring supported body, a universal coupling between the motor and the second gear, a tube which surrounds and supports the shaft of the motor and a distance bar for holding the motor at a fixed distance from the axle carrying the first named gear.

768,641. Starting Vaporizer for Explosive Engines. William W. Tuck, Richmond Hill, August Wassmann, Hallets Point, and Abbot A. Low, Horseshoe, N. Y., assignors to said Low. Filed May 6, 1903. Serial No. 155,825. (No model.)

Claim.—1. The combination with an explosive engine, of means for introducing vaporized hydrocarbon admixed with air into the combustion chamber, the same including a vaporizing chamber outside the combustion chamber and connected therewith, a muffler in said vaporizing chamber above and below its connection with the combustion chamber, a damper between the lower muffler and said connection, and a holder for the hydrocarbon mounted on the upper end of the vaporizing chamber.

768,684. Pneumatic Tire. John Parmley, Paterson, N. J. Filed Feb. 10, 1904. Serial No. 193,030. (No model.)

Claim.—1. A pneumatic tire, comprising an outer tube having a longitudinally extending internal perforated segmental tread section,

and an inner tube having a downwardly extending rib directly above said tread section, said tubes being spaced apart to form between the inner and outer tubes two communicating air chambers, a supply valve common to both tubes, channels connecting said valve and tubes and means whereby the latter may be independently inflated, substantially as set forth.

768,687. Electric Sparking Igniter for Explosive Motors. Lucius J. Phelps, Stoneham, Mass., assignor to Phelps Motor Vehicle Company, Stoneham, Mass., a corporation of Maine. Filed April 9, 1903. Serial No. 151,840. (No model.)

Claim 1. In a make-and-break igniter for explosion engines, an electrode actuating device, a trip dog acted on thereby, an electrode operated on by said trip dog and removable from operative position independently of the trip dog, and a resilient connection between said trip dog and electrode normally holding the latter in operative position.

768,714. Turbine-driven Locomotive or Vehicle. James Wilkinson, Birmingham, Ala., assignor to The Wilkinson Steam Turbine Company, Birmingham, Ala., a corporation of Alabama. Filed May 13, 1904. Serial No. 207,769. (No model.)

Claim.—1. In a driving mechanism for a traction engine, the combination with a main frame, wheels and an axle therefor, a bearing thereon on which said frame is journaled, of a rotary motor mounted on said frame, a power transmission shaft driven by said motor, a universal joint in said shaft, means to pivotally support the outer end of said shaft on said main frame journal bearing, and a pinion on said outer end of said

shaft which meshes with teeth on the side of said wheel.

768,857. Automobile. James E. Kelly, New York, N. Y. Filed June 11, 1904. Serial No. 212,155. (No model.)

Claim.—1. The combination with a carriage axle A and swivelling parts B of the lever D mounted on the latter and adapted both to swivel therewith and to tilt or turn vertically thereon, means for imparting such tilting motion and the fender wheels W' carried on such lever and carrying wheels C carried on movable axles, all arranged for joint operation substantially as herein specified.

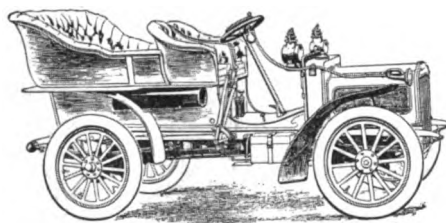
768,860. Tire. Orville L. Leach, Elmwood, R. I. Filed Aug. 6, 1903. Serial No. 168,524. (No model.)

Claim.—In a structure of the class described, the combination with a channelled rim, of spokes passing through the rim and having their outer ends headed down upon the bottom of the channel, and an elastic tire stretched longitudinally and seated in the channel, said tire having open ended cylindrical air sockets extending into the same from its inner side and terminating short of the outer side, the inner open ends of said sockets being covered by the rim and certain of the same receiving the headed ends of the spokes.

768,862. Motor Vehicle. Ralph L. Morgan, Worcester, Mass. Filed Feb. 29, 1904. Serial No. 195,758. (No model.)

Claim.—1. In an automobile, the combination of a framework, having side pieces and a cross bar, an engine casing having one end connected by a universal joint with the cross bar of the framework and having oppositely extending projections near the other end of the engine casing connected by uni-

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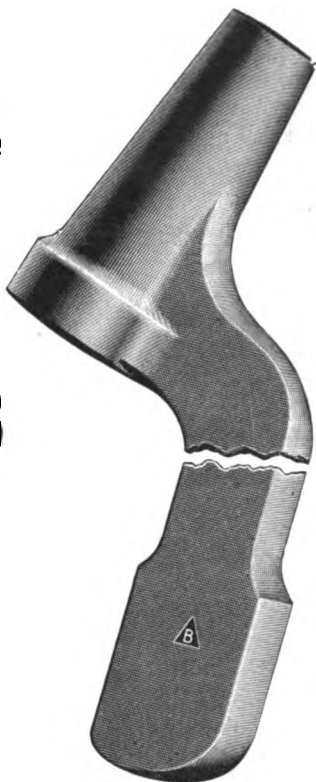
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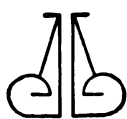


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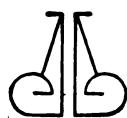
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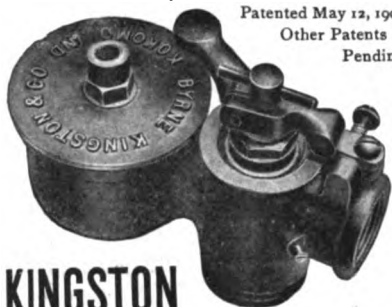
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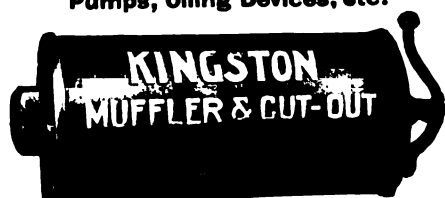
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Cleveland.

versal joints with the side bar of the frame-work and a power shaft journaled in the last two named projections, with its ends extending beyond the side bars of the frame-work.

768,943. Hollow Rubber Bulb, Ball or Analogous Article. Irwin F. Kepler, Akron, Ohio, assignor to The B. F. Goodrich Company, of Ohio, Akron, Ohio, a corporation of Ohio. Filed Aug. 31, 1903. Serial No. 171,378. (No model.)

Claim.—1. A vulcanized hollow rubber bulb, ball or analogous article made from uncured rubber tubing, substantially as described.

2. A vulcanized hollow rubber bulb, all or analogous article made from a double walled edge-joined blank cut from uncured rubber tubing, substantially as described.

769,069. Tire for Vehicles. John H. W. Fitzgerald, Bedford Park, England. Filed April 25, 1903. Serial No. 154,302. (No model.)

Claim.—In a tire for vehicles, the tire body formed in its periphery with a channelled seat having groove enlargements at its edges, a flexible laminated band fitted in said seat and having enlarged edge portions engaging said groove enlargements, and cores extending through the enlarged edge portions of the band.

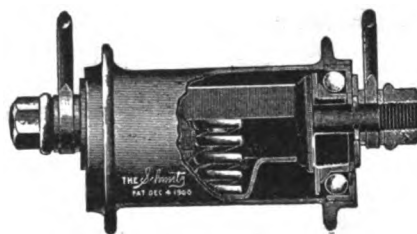
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have any ignition outfit than to have a poor one.

WE MANUFACTURE NOTHING BUT THE BEST.



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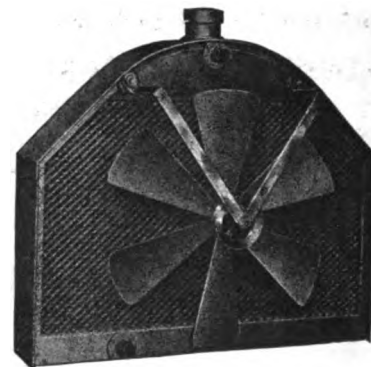
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For 1905.



Experiments are Expensive.

Sometimes they are not only expensive, but fatal. This is especially true in motor car construction. It is, therefore, always on the side of safety and good judgment to adopt those parts which have stood the test of time and have acquired for themselves a reputation based upon actual merit. Price is not always the most important consideration.

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Protection for Man and His Motor

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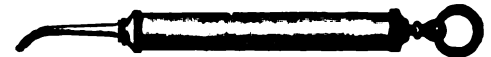
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This oil gun or syringe should be part of the equipment of
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saved. Furnished in polished brass. Diameter of barrel: 1 in.
Total length 13 1/4 in. Guaranteed.

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"No, it's a Railroad from Cincinnati to Chicago. Speaking of food,
I got the best meal on their cars I ever had on a railroad."

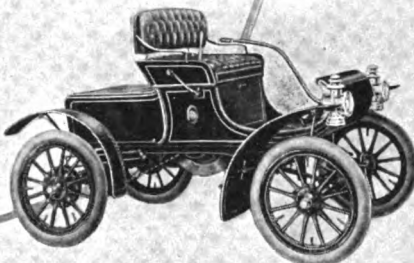
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When you're ready the Oldsmobile will go. The name stands for reliability. The Oldsmobile is *built to run and does it.*

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Price \$650**



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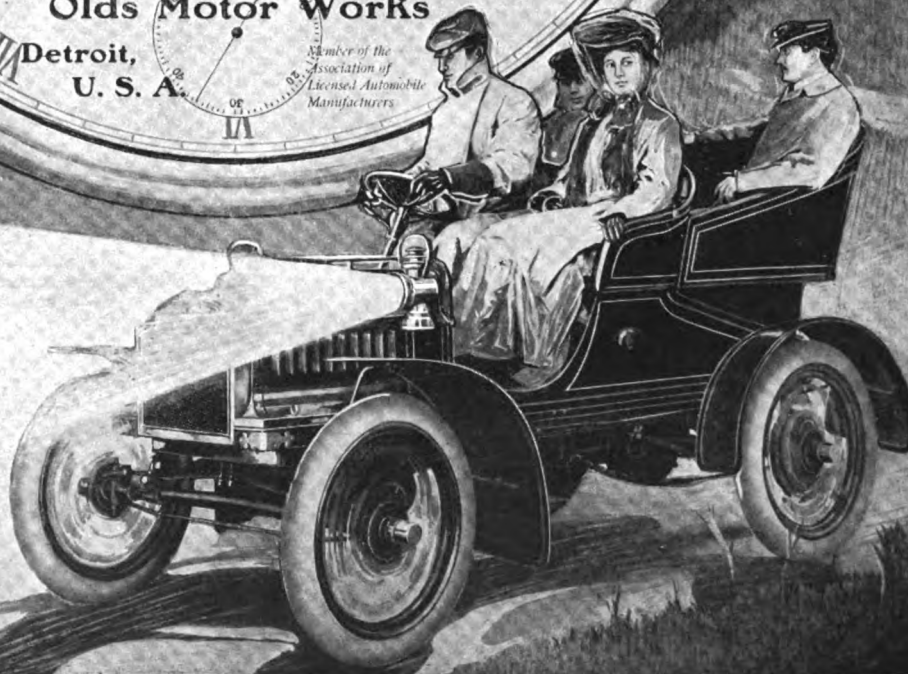
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21 more Goodrich Tires than any other make.

Over 50 per cent. of the Goodrich Tires started from
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Not a new Goodrich Tire that showed a defect or
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Two old cases which had run 12,000 and 15,000 miles
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Such a record speaks volumes and gives to the

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The Cleanest Tire Score Ever Achieved
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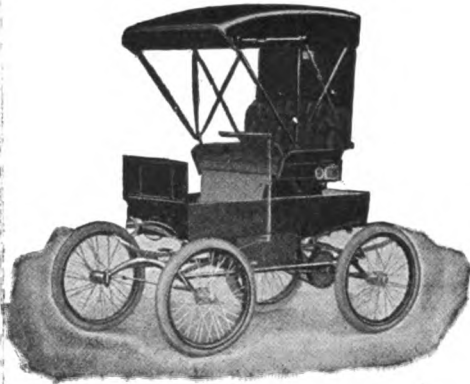
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Established the world records for electrics, at Ormond Beach, Fla.—one mile, 60 3-5 seconds.

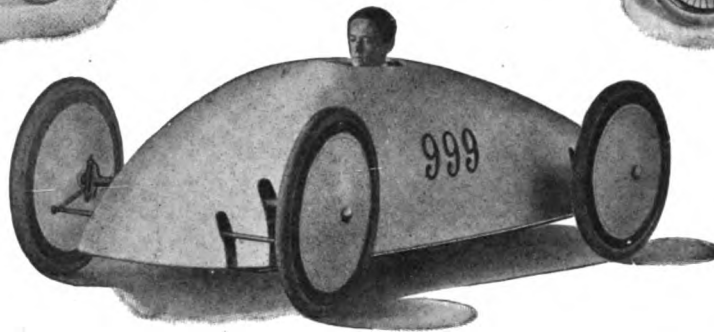
This Racer had a 3-4 h. p. motor and 12 cells of battery of same size and weight as used in our Runabout.



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The efficiency is just the same as the Racer, only differently applied.



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Members of the Association of Licensed Automobile Manufacturers.

AN UNSOLICITED TESTIMONIAL.

Rockford, Ills., July 19, '04.

I take the liberty of writing you direct instead of conferring with your agent at this place, for which you will pardon me. I am a Cadillac enthusiast; I have one of your machines. While this is not the first machine I have owned, yet I have become very enthusiastic over your machine, and I think I have the very best of reasons for being so. I left this place (Rockford, Ills.) with my machine for St. Louis with three on board and three suit cases, with all tools and paraphernalia necessary for the trip, and made a phenomenal run. The distance made was 396 miles; left here Monday morning, June 27th. Arrived at St. Louis Thursday morning, June 30th, at 10 o'clock. While much of the road was good, we passed over some of the worse roads I ever saw, especially from Springfield to St. Louis by way of Bunker Hill road. It was one continuous stretch of hills, with mud in many places so deep that my fenders touched the ground; but not once did my machine falter or fail to reply to my command; not once was I delayed or aided in any manner during the day. I passed several large machines stalled or broken down. One large French machine making a time run across the Continent was pulled out of the mud and up the hills twice that day.

During the entire three days' run my sparking plug was not taken from the cylinder, and during the entire trip to St. Louis and return the pump was not put to the tires. Not once was I obliged to stop from overheating or any other cause.

Very respectfully yours,

(Signed) E. C. DUNN, M. D.

"NUFF SED."

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Member Association of Licensed Automobile Manufacturers.

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STEVENS-DURYEA
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IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
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Cleveland 10 hours
CHICAGO 24 hours.



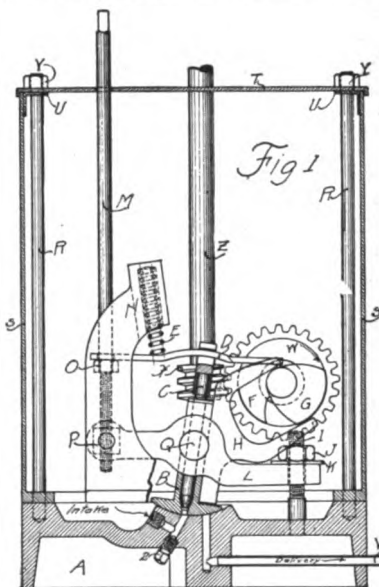
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New York 4 days.
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*We are supplying the largest
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THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

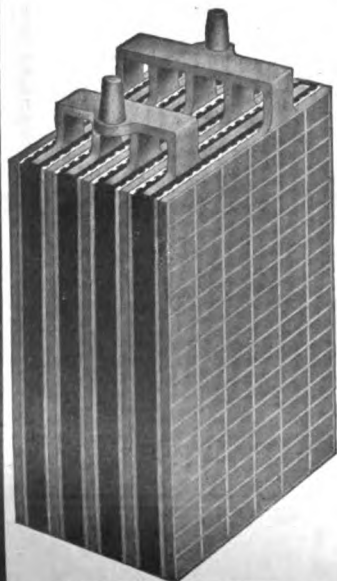
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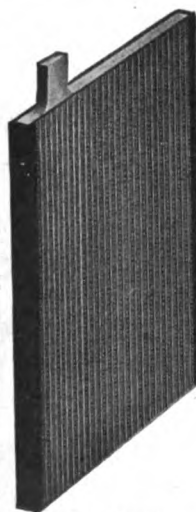
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Light Weight

STORAGE BATTERY

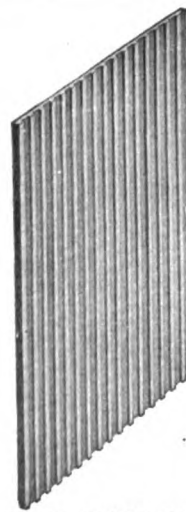
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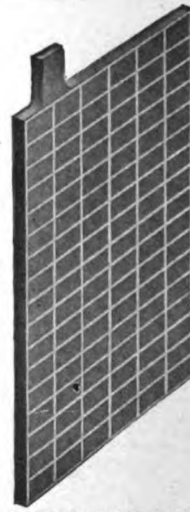
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SHEATH OVER
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TRY US FOR PRESSED STEEL FRAMES.

We are making them from the Highest Grade of Cold Rolled Steel under the most perfect conditions of manufacture.

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CLEVELAND CAR SPECIALTY CO.,

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Unique and Unparalleled Performance of the Pathfinder

ELMORE



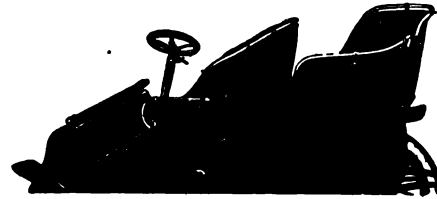
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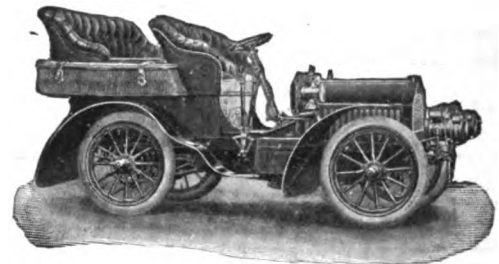
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Or, if you have your machine now, have your DEALER
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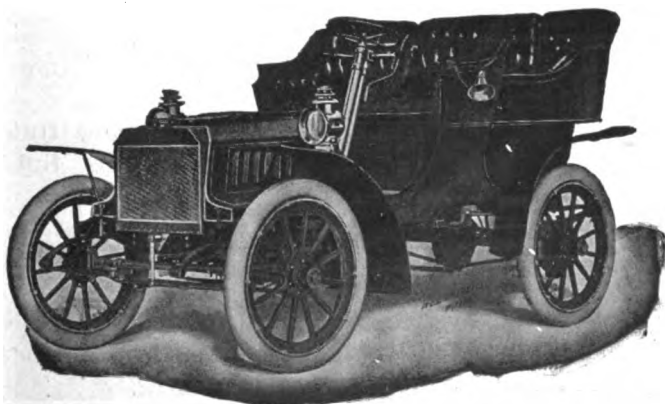


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From an owner of a 4-cylinder Locomobile.

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FOUR-PASSENGER AUTOCAR.

In spite of the many improvements in this widely-sold car we have not changed the price — **\$1,700** at the factory.

Two cylinder, horizontal, opposed motor in front.	Automatic oiling of engine and other parts.
Ball bearing transmission gear.	Gear drive.
Wheel or lever steerer.	Every part instantly accessible.
Divided front seat.	

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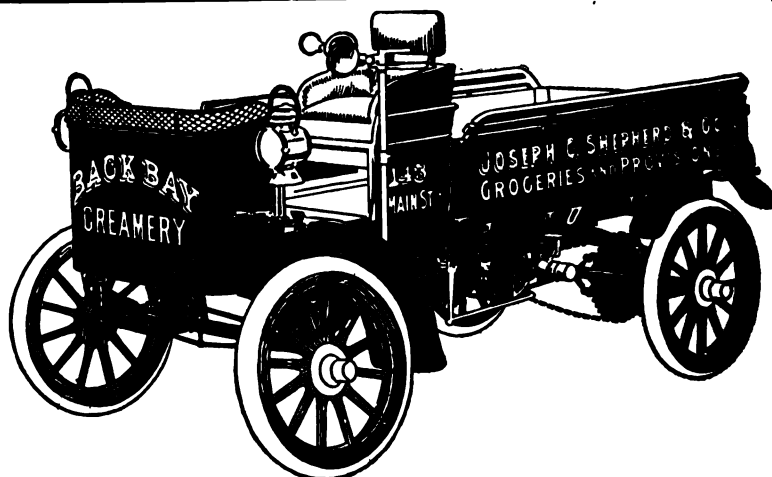
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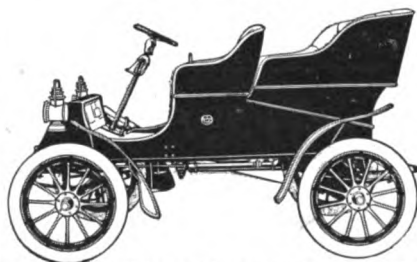
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SELLING AGENCIES IN ALL PRINCIPAL CITIES.



A good name is better than Promises.

THE FORD



has a reputation for reliability, second to no motor car in the world. For the professional or the business man who needs a machine for every day use, THE FORD stands prominent as "The Car of Satisfaction." Verified facts are better than "claims."

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Planetary transmission in oiltight dust proof case.

The perfected construction of the FORD is the result of 15 years actual

experience in building gasoline automobiles. DON'T EXPERIMENT—JUST BUY A FORD.

Full particulars and catalogue for the asking.

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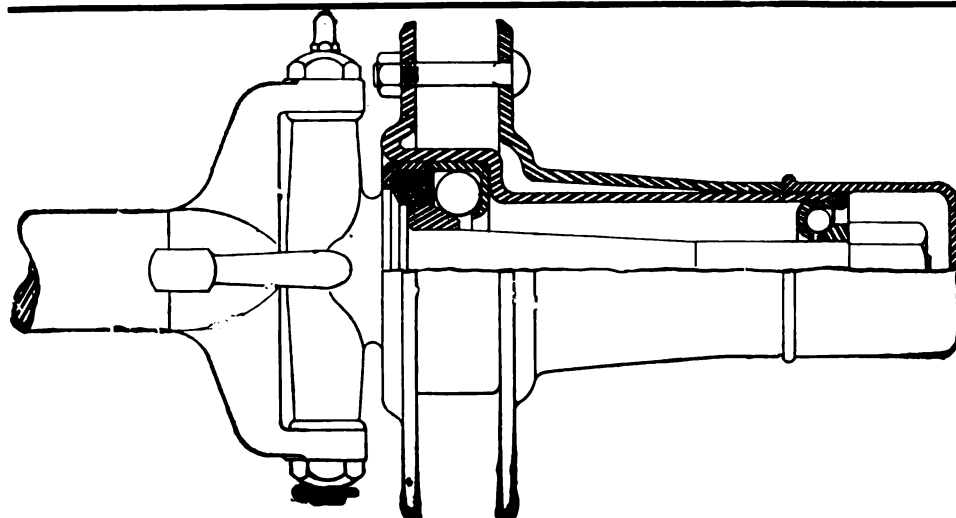
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ARE MADE BY

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THESE HUBS are drawn from Sheet Steel.

Extremely light and strong Hubs with a smooth surface for finish are obtained.

Center line of Spokes is close to Steering Head. Smooth and Easy Steering is obtained.

Races are GROUND IN POSITION.

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We manufacture for the trade only.

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CLEVELAND OHIO U. S. A.

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Your
SPECIFICATIONS
 for
FORGINGS
 should reach us promptly to insure
 Seasonable Deliveries.
ARE YOU READY?
WE ARE.
 THE BILLINGS & SPENCER CO., Hartford, Conn., U. S. A.
 Makers of
 Drop Forgings of Every Description.



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is a difficult subject.

MAKING RIMS

(the kind that stay true) is an art.

“SWEDOH”

Spring Steel Rims

represent the highest achievement of the art of rim-making.

They are used by most conscientious automobile builders and are indorsed by all tire manufacturers.

“Swedoh” Spring Steel Rims


are made by

THE AMERICAN TUBE & STAMPING CO.,

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We own and operate our steel billet-making and hot and cold rolling mills and stamping works.





MY DAD SAYS
 I CAN HAVE
 AN AUTO
 WITH
 MORGAN
 &
 WRIGHT
 TIRES ON
 WHEN I
 GET
 BIGGER

Reproduction of above picture in nine
 colors sent to auto owners on request.

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CHICAGO.

New York
St. Louis

Dayton
San Francisco

Detroit

We Do Not Build Racing Machines BUT

At Del Monte, California, on August 26th and 27th. a regular stock

Rambler

Won the 5-mile race for light touring cars in 8:16¾.

Won the Australian pursuit race for cars costing \$2500 or less in 8¾ miles; time, 17:49.

Won the hill-climbing contest for cars costing between \$1000 and \$2500, on a course 1½ miles long, with grades from 2 to 18 per cent., in 3:04.

Won the 5-mile race for cars costing \$2500 or less, in 6:15¾.

Won the 5-mile race for cars rated at 16 horse power or less, in 6:01.

Rambler

machines entered in eight races and received

Five First and Two Second Prizes.

SUMMARY:

Five miles, for light touring cars:

H. COUSINS,	RAMBLER,	FIRST
Cuyler Lee,	Cadillac,	Second
Time, 8:16¾.		

Australian Pursuit Race, for cars costing \$2,500 or less:

W. E. SAUNDERS,	RAMBLER,	FIRST
W. Grothe,	White,	Second
W. K. Cowan,	RAMBLER,	Third
Distance, 8¾ miles.		
Time, 17:49.		

Hill climbing contest for cars costing from \$1,000 to \$2,500:

W. E. SAUNDERS,	RAMBLER,	FIRST
W. K. Cowan,	RAMBLER,	Second
W. Grothe,	White,	Third
Distance, 1½ miles.		
Grade, 2 to 18 per cent.		
Time, 3:04.		

Five miles, for cars costing \$2,500 or less:

W. E. SAUNDERS,	RAMBLER,	FIRST
W. Grothe,	White,	Second
W. K. Cowan,	RAMBLER,	Third
E. E. Russell,	Thomas,	Fourth
Time, 6:15¾.		

Five-mile race for cars not over 16 horsepower:

W. E. SAUNDERS,	RAMBLER,	FIRST
W. K. Cowan,	RAMBLER,	Second
Time, 6:01.		

Hill climbing contest for cars costing from \$2,000 to \$4,000:

Bert Dingley,	Pope-Toledo,	FIRST	Time.
W. E. SAUNDERS,	RAMBLER,	Second	2:43
H. M. Chambers,	Grent Arrow,	Third	3:25½
W. K. Cowan,	RAMBLER,	Fourth	3:35
Distance, 1½ miles.			
Grade, 2 to 18 per cent.			

Why not write for our illustrated motor book; it explains why the

Rambler

excels the high-price cars; it is an American machine, not a copy, and can hold its own in any company.

"Our Little History" is entertaining; it is also free for the asking.

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THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

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No. 25

SOLVING CHAFFEUR PROBLEM

New York Trade Association Adopts a Policy That Should Produce Good Results.

The New York Automobile Trade Association now has the chauffeur problem well in hand and seems to have reached the most practicable solution possible.

This developed at last week's meeting of the organization, when the registration committee submitted its report. It appears that as soon as new chauffeurs are registered under the State law at Albany their names are obtained and the list circulated among members of the association to discover whether there are any flagrantly incompetent or improper men among them. It is not in the nature of establishing a black list, but is designed to obtain information regarding objectionable chauffeurs.

It also has been decided that henceforth applications for registration at the association's bureau must have the indorsement of a garage owner or recommendations from previous employers, or both when possible.

The registration bureau is in charge of John F. Plummer, of the Locomobile branch; H. Rossiter Worthington, of the Worthington Automobile Co., and W. P. Kennedy, the secretary of the association.

A membership committee, consisting of Justin C. Walker, of the Mobile Co.; Joseph Ball, of the White agency, and E. T. Birdsall, of the Standard Automobile Co., was appointed to recruit members and investigate candidates for membership. Meetings will hereafter be held fortnightly instead of weekly.

The association decided to co-operate with the Automobile Club in an attempt to abate the present obnoxious ferry regulations when Congress shall have convened and be able to remedy the trouble by legislative amendment.

Secretary Kennedy reported that the tabulation of the repair and storage charges at the various garages is almost ready for printing.

A judgment against the New York Garage Co. for \$44 has been entered by Peter Fogarty, of this city.

Fisk Establishes Western Department.

At a general conference of the Fisk Rubber Co., which is being held at the factory, in Chicopee Falls, Mass., this week, among other important matters decided upon was the creation of a western department, with headquarters located at Chicago, Ill., from which it is intended to handle all business west of Buffalo. The move was necessitated by the rapidly growing business of the company, which has exerted such a pressure on the factory office and force as to make it imperative that some relief be obtained.

The new department will be under the management of Mr. Frank C. Riggs, who for the past year or more has been in charge of the retail automobile store of W. E. Metzger, in Detroit, Mich., and who by this change is enabled to return to his favorite line of work—the wholesale business. The local branch of the Fisk Rubber Co., in Chicago, in charge of Mr. Ben Pratt, will, of course, be continued.

Garden Goes With Quaker City.

It is now General Manager R. D. Garden. The well known Philadelphia tradesman, formerly in charge of the closed Pope branch in that city, has engaged himself with the Quaker City Automobile Co. in the capacity of general manager. He will enter on his new duties at once.

The Quaker City company is a strong concern, which represents such well known cars as the Pope-Toledo, Oldsmobile and White. It has a well equipped salesroom and garage, the latter having a capacity of two hundred and fifty cars.

Auction Sale for Century Effects.

September 22 is the day on which the last act in the history of the Century Motor Vehicle Co., of Syracuse, N. Y., will be played and the curtain rung down on that ill fated concern. On that date, at 11 a. m., the remaining assets of the company will be disposed of at public auction, at the front door of the courthouse, by Trustee Harold Stone. The assets referred to consist of one electric automobile, book accounts, patents, claims and choses in action.

Norris Mason has disposed of his interests in the United States agency of the Michelin Tire Co., to G. G. McMurtry, and has retired from the Presidency of the concern.

SANDUSKY'S OUTLOOK GLOOMY

Liabilities Largely Exceed Assets, and the Creditors are Likely to Fare Very Badly.

The Sandusky (Ohio) Automobile Company, which last month was petitioned into bankruptcy, has an indebtedness, as nearly as can be estimated at this time, of \$55,000. Its assets consist of about forty acres of real estate, platted into town lots and known as The Automobile Company's Addition to the City of Sandusky; a plant valued at about \$15,000, and stock on hand worth from \$5,000 to \$7,000.

It is believed that by judicious handling there may be realized for the creditors an amount somewhere between \$25,000 and \$40,000, from which must be first paid a mortgage of \$15,000, the balance to be distributed among creditors whose claims amount to about \$40,000. If, however, the matter is closed out as rapidly as possible, without regard to the interests of creditors, it is thought that but a very small dividend, if any, will be paid.

Rainey Stock Bought by Partners.

R. M. Owen and Roy A. Rainey have bought from the estate of the late William T. Rainey its stock in the American Automobile Storage Co. and divided it equally between them. The late Mr. Rainey was but thirty-nine years old at the time of his death, a few weeks ago. He was one of the pioneer users of automobiles in this country.

Jobbing Concern for Los Angeles.

The Chanslor & Lyon Motor Supply Co. is the style of a new concern that will begin business in Los Angeles, Cal., on October 1. It will carry a complete stock of accessories, tires included, and will do both a retail and jobbing business.

Fire Guts Columbus Plant.

The plant of the Vehicle Hood and Apron Co., of Columbus, Ohio, was gutted by fire on Wednesday last; estimated loss, \$25,000. The concern included automobile canopies, hoods, aprons, etc, in its productions.

OLDS BEGINS TO BUILD

Site Selected and Foundation of an Immense Plant at Lansing is Laid.

A 20-acre tract of ground, advantageously situated as regards railway connections, has been purchased, and work begun on four immense buildings for the R. E. Olds Co. at Lansing, Mich. Materials are on the way, and contracts call for completion of the plant within ninety days. Much of the machinery for the plant has been ordered, and a force of draughtsmen is already at work in temporary quarters on designs for special mechanical equipment that will be needed. Spurs run into the property from the Grand Trunk and Lake Shore railways.

All the buildings will be of solid and substantial character, and in laying out the grounds the æsthetic side of their arrangement will be considered. The office building will front on Washington street and be in close proximity to the testing track and park, which will be sown with grass and laid out by landscape artists.

In planning the grounds attention has also been given to the appearance from Washington avenue. The office building has an especially attractive front, in which the stone trimmings are conspicuous. Its two stories make it a building of fine appearance, and it sets back from the avenue fifty feet. None of the large factory buildings will extend to the avenue.

The other four buildings will be two stories in height, of brick construction, with concrete foundations. The largest one is the machine shop, 700x70 feet, which is next to the testing track. Then come three other buildings, their dimensions being 60x500, 70x500 and 70x500, respectively.

Hurlbert Will Manage Packard Branch.

The Packard Motor Car Co. has at last succeeded in securing a new New York branch manager, and an unusually capable one at that—W. H. Hurlbert, long associated with W. E. Metzger and the Cadillac Automobile Co., who severs that connection this week to assume his new duties. Mr. Hurlbert has long been recognized as one of the best gas engine and automobile experts in the country, and is, withal, a most agreeable and likable man.

Possible no one will welcome the change more than genial Colonel Pardee, who, much against his will, has been managing the New York branch, for, despite the many friends he has made in the metropolis, social and business interests in Chicago had too strong a claim to admit of his ever being contented away from the Windy City on the lake.

It is understood that, if proper quarters can be secured, the Packard company stand ready to fit up larger and better equipped headquarters in New York.

Jardine Joins Royal Staff.

Robert Jardine, well known to practically the entire trade, has joined the Royal Motor Car Co., of Cleveland, and will have charge of their mechanical department.

In announcing the fact, Sales Manager McCrea adds: "We are considerably elated by securing Mr. Jardine's services, as they assure us a car that is not only thoroughly practical and up to date, but equal to anything made in this country or abroad."

Mr. Jardine has recently been in charge of the engineering department of the Federal Mfg. Co., prior to which he was mechanical engineer and superintendent of the Berg Automobile Co. from the time of its organiza-



ROBERT JARDINE.

tion, and produced the Berg car and later the new light weight Meteor. Prior to the organization of the Berg Co., Jardine was for a long period connected with A. Clement & Cie, of Paris. He also served with Malicet & Blin, as well as the Electro Motion Co.; in fact, he spent over five years in factories in England and France. He is admitted to be one of the most capable and experienced engineers in this country.

Jones Brings Out an Odometer.

J. W. Jones, the Speedometer man, has invented and is just marketing an odometer operated by a flexible shaft and gear wheel similar to that employed with his speed recording instrument, the odometer being attached to the dashboard; it lists at \$30.

Howard Succeeds Riggs in Detroit.

L. A. Howard, for several years in charge of W. E. Metzger's Woodward avenue bicycle store, in Detroit, has been appointed manager of the Metzger automobile store, on Jefferson avenue. He succeeds Frank C. Riggs, who has joined the Fisk tire staff.

TO SQUELCH OUTLAW SHOWS

N. A. A. M. Makes Public its Rule and Form of Agreement—The Forfeitures Outlined.

Henceforth manufacturers who may exhibit at an unsanctioned show will be required to "have a care" in applying for space at any future exhibition. The regulations governing the matter were amplified and placed in formal shape at the meeting of the executive committee of the N. A. A. M. last week. The agreement, which must be signed by all applicants for space, which application is usually accompanied by a cash deposit, requires the applicant to consent to the forfeiting of both the cash and any space that may have been allotted to him if it is proven that his goods have been displayed at an "outlaw" show.

The text of the rule and agreement is as follows:

No person, firm, company or association shall be permitted to exhibit, directly or indirectly, in his or their own name or in the name of an agent, dealer, jobber, branch house, or any other person, firm, company or association, who or which has or have exhibited or contracted to exhibit, or permitted goods made or imported by him or them which he or they own or control to be exhibited at any automobile show held in the United States after the first day of September, 1904, which has not been officially sanctioned by the National Association of Automobile Manufacturers, Inc. The applicant hereby expressly agrees, in consideration of the examination of, attention to and deliberations upon his application, that in case such goods shall have been, subsequent to September 1, 1904, or shall hereafter be exhibited or in case any agreement shall have been, subsequent to said date, or shall hereafter be made, to exhibit them, or in case anything shall have been done by the applicant contrary to the letter or spirit of the foregoing rule, and space allotted to him, them or it, at the ——— annual show in (insert name of city) and any sum which may have been paid for rental thereof, shall be forfeited to the (here insert name of promoting organization) and shall be at the disposition of the said (here insert the name of promoting organization) unreservedly, no matter at what time after the date of this application such transgression of this rule shall have occurred.

The Week's Incorporation.

Newark, N. J.—The Webb Co., under New Jersey laws, with \$50,000 capital; to manufacture motor vehicles and machinery. Corporators—Walter H. Bond, Paul Munter and Joseph Gerrardt.

It is reported that Paul Deming, manager of the New York branch of the White Sewing Machine Co., has resigned.

NO RELIEF ON FERRIES

Except Through Courts or Congress—Commerce and Labor Department Made no Ruling.

To relieve the situation with regard to the carrying of automobiles by the ferries of New York City, the Automobile Club of America finds that it will be necessary to either wait until Congress meets and apply for an amendment to the present law, or to make a test case and endeavor to obtain an interpretation from the courts that will compel the ferries to remove the restrictions now being imposed and to carry automobiles the same as other vehicles. As either move involves a period of waiting, it is probable that both plans will be put into operation. All hope for a favorable interpretation from the Department of Commerce and Labor was dissipated by the formal and final reply from that bureau in response to an appeal made by the special committee of the A. C. A., headed by Jefferson Seligman. This reply, which was given out by the A. C. A. last Saturday, was addressed to Jefferson Seligman, and signed by J. H. Metcalf, secretary. In it the whole question was threshed out, as follows:

"Referring further to the conversation between Mr. Niles and yourself with me, in which you appeared as a committee of the Automobile Club of America on August 8, 1904, in regard to the use of ferries by gasoline motor vehicles, and the effect of R. S. 4,472 upon such use, allow me to reply as follows:

"I have carefully noted all that you have submitted in connection therewith, and fully appreciate the extent and importance of the interest of your organization in this matter, as well as the general concern of the public therein.

"The law upon this matter is as follows:

"Act of February 20, 1901—'Nothing in the foregoing or following sections of this act (R. S. 4,472) shall prohibit the transportation by steam vessels of gasoline or any of the products of petroleum when carried by motor vehicles (commonly known as automobiles) using the same as a source of motive power: Provided, however, that all fire, if any, in such vehicles or automobiles be extinguished before entering the said vessel, and that the same be not relighted until after said vehicle shall have left the same: Provided, further, that any owner, master, agent or other person having charge of passenger steam vessels shall have the right to refuse to transport automobile vehicles, the tanks of which contain gasoline, naphtha or other dangerous burning fluids.'

"The above quoted law constitutes absolutely all the substantive provisions that are in force on this subject. A somewhat common misapprehension has arisen, to the effect that the situation complained of is due in some way to rulings or regulations of this

department, or specific action of certain officers thereof upon the matter.

"On the contrary, no regulations whatsoever have been made by the board of supervising inspectors on this subject, nor has any ruling been made thereon by the department, or by any branch or officer thereof. Let me make it quite clear, therefore, that the situation complained of is due wholly and exclusively to the state of the statute law, and is in no way dependent upon, or affected by, any ruling, regulation or interpretation of this department, or of any inspectors or officers thereof.

"Furthermore, such being the condition of the statutes, this department has no authority to modify the same by any ruling, regulation or interpretation, so as to meet the difficulties of which you complain.

"It is doubtless true that there may be good grounds for differences of opinion as to the correct interpretation of this law as it stands, but the interpretation of the law is a matter exclusively for the courts, not for this department. No ruling upon this law or interpretation thereof by this department would have any valid effect whatsoever upon the law, nor even if made would it be of any force or constitute any protection to any one violating R. S. 4,472 and its amendment above quoted, in case a suit was brought to collect the fine.

"Nor has this department the duty or power of enforcing this statute, the same being lodged in the hands of the Collector of the Port and the United States attorney in the district where the violation may occur.

"It is needless to add that I greatly regret any inconvenience that may have arisen from the existence of this law; but, in view of the legal situation as above stated, it is obvious that this department has no power to offer any remedy. Any views that the department might hold upon the construction or interpretation of the law would be merely a matter of opinion, and the court enforcing the law would in no way be bound thereby.

"Under the circumstances, the only practical remedy available would be an application to Congress for legislation modifying the present statute."

Remington Factory for Black Diamond.

Preparations are well under way to transform the old Remington automobile factory at Utica, N. Y., into an establishment for the production of Buckmobiles. It is expected that in about a month it will be ready to accommodate the consolidated Buckmobile Co., now known as the Black Diamond Automobile Co.

Increases Battery Stock to \$1,000,000

The National Battery Co., of Buffalo, N. Y., has filed at Albany a certificate of an increase of capital stock from \$500,000 to \$1,000,000. The new issue is to be 6 per cent preferred stock. Among the directors are R. L. Coleman, W. H. Miller, George Pope and Paul Walton.

WHITE CARS WITHDRAWN

Will Not be Completed in Time for Vanderbilt Cup Race—Eighteen Other Entrants.

Notwithstanding the withdrawal of the two White cars, which was announced on Saturday, there are still eighteen entries for the race for the Vanderbilt Cup, which takes place on Long Island on October 8. Of these five are American built, six of French, five of German and two of Italian make. This assures a representative field and a good race, in spite of the much regretted deletion of the White entries already referred to.

As the White cars were the first to be entered, so they were the only contestants using steam. The fact that the entrance fee of \$600 for each car was actually paid is ample proof of the bona fides of the White entry. Their withdrawal is due to its being found impracticable to turn them out and properly test them in time for the race. This being so, the White company was unwilling to proceed further in the matter. The cars are actually under construction, however, and much is expected of them when completed. Assurances are given that they will be ready in ample time to compete in 1905.

Within the last week there has been a very appreciable increase of interest in the race, and every indication now points to its being a rousing success, not only from a sporting, but from a spectacular viewpoint.

It was originally intended to treat only the turns of the course with oil, but it was decided on Saturday to expend \$5,000 in sprinkling the roads with oil, so as to effectually keep down the dust. Thus sum is guaranteed by the donor of the cup, who desires that every means possible be taken to prevent accidents during the competition.

So great is the interest attached to the event and so many are the demands for seats that it has been decided to build the grandstand near Westbury at least twice the size first planned. Care is to be taken that none of the seats gets into the hands of speculators, and applicants, to insure favorable action, will need to be vouched for by members of the American Automobile Association or of affiliated clubs. Placards have been struck off and posted in the stores and garages and other places stating that the boxes and seats are now on sale. The former, seating six, are priced at \$50 each, while seats cost \$5 each.

The world's best cars and the pick of American drivers will appear at the starting point on October 8. The eighteen remaining entries, with their owners and drivers, are as follows:

United States—Colonel Albert A. Pope, two Pope-Toledos (A. C. Webb and H. H. Lyttle, drivers); C. A. Duerr, Royal Tourist ("Joe" Tracy, driver); Packard Motor Car Co., Gray Wolf (Charles Schmidt, driver); Frank H. Croker, Simplex (driven by owner).

France—Panhard & Levassor, three Panhards (Heath Teste and unknown, drivers); Albert Clement, Clement Bayard (driven by owner); W. G. Brokaw, Renault (M. G. Perin, driver); R. E. Jarrige, De Dietrich (L. Regan, driver).

Germany—E. R. Thomas, Mercedes (E. E. Hawley, driver); Isidore Wormser, Mercedes (driver unknown); Clarence Gray Dinsmore, Mercedes (driver unknown); S. B. Stevens, jr., Mercedes (driven by owner); George A. Arents, jr., Mercedes (Carl Mensel, driver).

Italy—Alfred G. Vanderbilt, Fiat (Paul Sartori, driver); William Wallace, Fiat (driven by owner).

The order of starting will be determined by lot at the Automobile Club on October 1.

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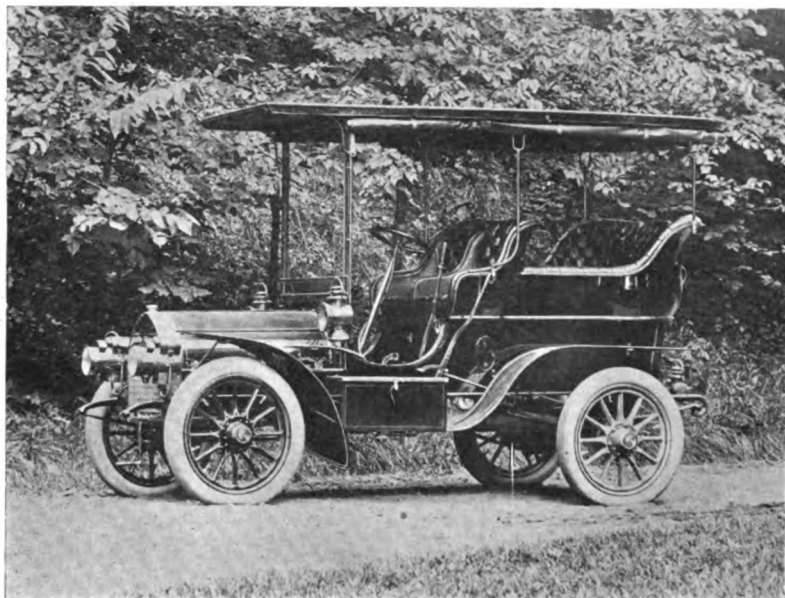
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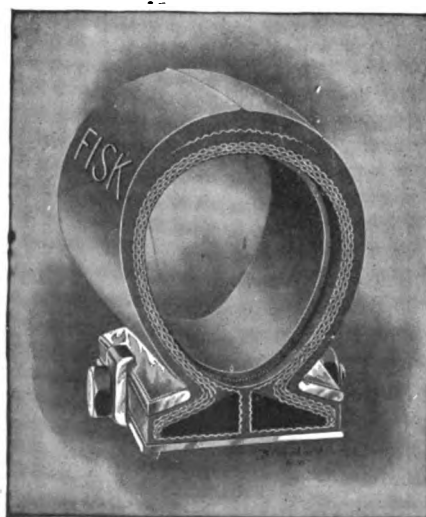
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The Factor of Safety.

When we come to think of it, the number of automobile accidents caused by breakages of parts is remarkably and gratifyingly small—so small, in fact, as to be almost negligible. When we consider, too, the use to which cars are subjected, the driving at speeds of twenty, thirty and even forty miles an hour, heavily loaded, over all sorts and conditions of roads, our wonder should be increased. But, truth to tell, we seldom give the matter a thought, expecting the car to stand up under any and all stresses—and almost never being disappointed.

In considerable part this remarkable immunity from accidents is due to the large factor of safety possessed by nearly all cars.

Since the beginning of automobile building weights have steadily increased. Powers have increased, too, but not proportionately. It is quite safe to say that if horsepower had remained stationary during the last half

dozen years weights would still have increased. The initial mistake of building too light carried its penalty with it, as many makers know to their sorrow; and the repair of it has been no small matter. Perhaps designers have gone too far the other way. It would be strange if this were not so, when no demand for lightness existed and a few hundred pounds extra in engine, transmission or running gear counted for nothing. At any rate, when the weight scaling process sets in in earnest—and signs are not wanting that it is near at hand—present patterns will be good standards to go by.

The vital parts of the car, so far as the safety of its occupants are concerned, are contained mainly in the running gear. Wheels, axles, steering knuckles and rods, and, to a lesser extent, frames and springs—these are the vital points, and they have stood up nobly. It is true that a steering knuckle, or even an axle, does break occasionally; but, whether by good luck or good management it is not always possible to say, they seldom go when the car is traveling at speed. If they did there would be a sorry tale to tell.

This beatific condition of affairs cannot continue always. The time must come when not even the present combination of skilful designing, sound construction and good fortune will avail to exclude accidents. But until then we may well plume ourselves on present conditions and remember them as the golden days of the industry.

An Ounce of Prevention.

It is only too true that we become habituated to danger and ultimately grow careless. The men working in a gun powder mill think nothing of risks that would appall other people. Custom blunts their perceptions, that is all.

Garage employes become so accustomed to handling gasoline, and know from experience how slight is the danger of its catching fire, that they, too, become careless. They know that the common view of gasoline as a highly inflammable and easily ignited fluid is a mistaken one; they will prove this by putting a match to it to show that it is harmless.

But they know that it is not always immune. Mixed with the proper proportion of air gasoline will ignite and explode readily; and once ignited it is extremely difficult to extinguish the flame. Accidents of this kind will happen occasionally, and every garage should be prepared for them. It is

not enough to have the usual fire appliances called for by the city and insurance regulations. Pails of water, for example, are useless; nay, they are worse than useless, for water merely seems to encourage the fire. But if the pails are filled with sand a big step forward is taken. Sand has a marvelous effect on a gasoline fire; and if it were always at hand many conflagrations would be nipped in the bud, instead of being permitted to extend until they attain serious proportions.

Such a move as this would also tend to put the insurance people in a better humor. Automobiles and garages are not in particularly good odor with them just now. They have been bitten pretty often, and are naturally disposed to be shy.

Sharing the Responsibility.

No piece of machinery is ever given its initial run by experienced men without being gone over thoroughly and examined and then adjusted and tightened. No matter how carefully this may have been done in the beginning, it is known that everything will "shake down" and require an overhauling. No matter how tightly a nut may be driven home, a few hours' running will leave it in such a condition that a complete turn, or even two or three, can be given it when the wrench is put on it. The heavier and more powerful the machine, the more it will "shake down" and the greater need there will be for adjustment and tightening.

When an automobile falls into the hands of a mechanic, or of a person with mechanical knowledge or ability, this necessity is pretty well understood. Assuming that the car comes from the factory or garage in good order, such a person will, after a first ride, go over the entire mechanism intelligently and with an eye keen to observe. With a wrench and a screw driver the "innards" of the car will be looked into, and the needed stitch in time taken. The result will be an accession of knowledge regarding the car which will prove valuable on future runs and the putting to rights of little things that, neglected, would have given unmeasured trouble.

Such drivers as these are not always encountered, however. The dealer is thankful to secure such customers, for he knows that his car is in good hands. But he too often takes the stand that if the customer is of the opposite sort—one who takes a new car and runs it until it drops to pieces—he, the dealer, cannot help it. "If the owner will

not take care of his car I can't be expected to do so," he will exclaim in effect.

It is rather a shortsighted view of the matter, however, to look at it in this light. The dealer's interest in the car does not become extinct when it is sold. Its subsequent behavior is of direct consequence to him. If it behaves well it becomes a good advertisement and helps to sell other cars. But if, on the contrary, it behaves ill, if it breaks down or runs only with continual tinkering, or rattles like a wagon load of junk, it is a constant menace to the dealer's business.

Better by far to take a little trouble and look after the car. Reason with the owner and show him how he is getting poor service; give him an object lesson by running the machine into your shop, putting it to rights and then letting him see how differently it runs. It's long odds that he will see the point and be candid enough to admit it.

No Limit to Number of Cylinders.

There seems to be practically no limit to the number of cylinders entering into the construction of the modern gasoline engine. As recently as 1902 the appearance at Madison Square Garden of an American built car with a six cylinder engine evoked much shaking of the head and outspoken expressions of dubiety concerning its ability to run. As a matter of fact, that particular car never did run, and the parts which composed it have long been consigned to the scrap heap. But contemporaneous French practice had evolved practical six cylinder engines, and they have by this time, although the proportion of them in use is small, ceased to excite any remark.

Advanced and daring designers have gone further and produced eight and even twelve cylinder engines. If the trade has ceased to pay marked attention to them, it is because the four cylinder engines now in such general use are regarded as eminently satisfactory, rather than to any continued doubt as to their feasibility. Did the six, eight or twelve cylinder engine hold out sufficient inducement in the way of probable performance there would be plenty of them on the market in a few months.

For a couple of years at least current practice has been converging to a common point—i. e., the four cylinder car. Few care to go beyond it, and many of those who until now have held aloof have come around to it. More than four cylinders are not needed even where the most enormous power is required, while even for moderate priced and

powered touring cars there is a decided disinclination to regard anything less than four cylinders as inadequate. For this reason, as we have more than once pointed out, 1905 appears destined to go down into history as the four cylinder year. Whether all that is expected of the popular type of engine will be realized it is too early to say. Certainly there will be great benefit derived from its use; its advantages are too well known to need recapitulation, while its disadvantages, chief among which is its greater fuel consumption, will reveal themselves with use where they are not already known.

The True Basis for Comparison.

Whenever the horse and the automobile are compared by the unknowing or the shallow-thinking individual, the resulting presentment is usually more interesting than sound; generally speaking, it is favorable to the horse. An instance in which an automobilist was subjected to expense of upkeep so far beyond the average as to be stupendous, and which, on its face, indicated unusual circumstances, led the New-York World to editorially remark:

"Once upon a time the ways of the automobile were less known than they are now, and the human race was less sophisticated. Then it was that the makers of the devil wagons used to bait their victims with this deceptive sign: 'The automobile does not eat oats.' Ah, but doesn't it? There is little the devil wagon does not eat. Its appetite is voracious. The animal is as indiscriminate in its tastes as a shark, devouring everything that comes its way, preferring only that its food shall be predigested by conversion into greenbacks and certified checks. And such an appetite!"

Utterances of this nature are so common that it is refreshing to have the World taken to task by the Boston Herald in this logical and convincing language:

"The trouble with all comparisons between the horse and the automobile is that they are not made on a fair basis of work done. A man owning a driving horse which he uses for pleasure would consider a forty-mile drive an exceptional day's work. The owner of a motor car expects his machine to cover distances that in the past would only be made in steam trains. Furthermore, ten miles an hour would be a remarkable rate of speed for the hourse, while that is a low minimum for an automobile. Carrying, as it does, from two to five persons great distances over all kinds of roads at a high

rate of speed, no equal basis of comparison in cost can be drawn between the automobile and the horse. We presume if an automobilist expected no more from his car for a day's work than he would expect from his horse, the cost of repairs both to tires and the mechanism would be greatly reduced. The real wonder is, from the distances motor cars are run, that the cost of repairs is not greater.

The Herald might have added that it is not merely the work performed but the manner in which it is performed. Is there any man who, having travelled in a trolley car, would go back to the horse-drawn street car? We all know that however poor, he would stint himself that he might continue the use of the former. The automobile and the horse-drawn carriage afford a parallel.

While the automobile is usually hailed as a humane agent in that it affords relief by lessening the burdens of the horse, another of its benefits that is too frequently overlooked is the relief it at once affords very many drivers. With the horse-drawn wagons, the drivers and delivery men of the big stores and express companies, it is not unusual for these employes to work well into the night, before completing their rounds. With the motor wagon, they are enabled to cease their labors at about the same time that other men do so. They are thus not only obtain more rest and spend more time with their families, but the patrons of their employers are given prompter and earlier deliveries, and by reason of this lightening of their burdens it would seem scarcely a doubtful question but that the employers secure better service from the men. It is not easy to suggest anything that confers so many all-around benefits, shared by so many.

The New-York small boy has but just begun to realize the temptation of the rear step of the tonneau. When only the front seat of the car is occupied the rear step is an open invitation to him, but it is only this summer that the street urchin has, unbidden, made use of it. His practice of "catching on behind" is distinctly on the increase.

The cross-continent record made absolutely without the aid of horses still remains to be broken—or to be established. Automobiles must get out of mudholes or quicksands without the aid of animal power when a record to meet with unstinted recognition is the object sought.

Records Jarred at Rhode Island Meet.

Providence, R. I., Sept. 12.—The meet of the Rhode Island Automobile Club at Narragansett Park this afternoon, drew a large sprinkling of tradesmen, and, despite the threatening weather and the fact that the admission was one dollar, the attendance was about five thousand. The racing was interesting, if not exciting, and the breaking of records galore served to make the meeting memorable.

The big 100-horsepower Mercedes of H. L. Bowden, the same which Jenatzy drove in the last Bennett cup race—was, from a spectacular standpoint, the star of the day; it made rings around everything present, none of the famous American speed cars being on hand, though the Premier Comet was expected, and Carl Fisher was on hand, fuming at express companies and railroads, as the Comet was shipped from Indianapolis on



H. L. BOWDEN IN HIS 100-HORSEPOWER RECORD-BREAKER TALKING RACING TO A. E. MORRISON, OF BOSTON.

Thursday under a guarantee that it would reach its destination on time. As it was the Bowden machine had the centre of the stage, and twice broke the world's record for five and ten miles, placing the former first at 4:41 3-5 and the latter at 9:23 4-5, these figures being later marked down to 4:37 2-5 and 9:13, respectively, the fastest mile being covered in 54 4-5 seconds.

The steam freaks scooted around the track in fast time. That driven by Ross is of turtleback design, and whistles like a peanut stand; it gave the big Bowden machine a smart brush for one mile, leading it for one circuit of the track. Later it shed a tire, though its driver kept pluckily on and finished. Later, in the final of the ten-mile, Ross broke the steamer record for this distance, placing the mark at 10:26 1-5.

From a meritorious standpoint, though, the real feature of the day was the work of the little 875-pound 20-horsepower Ford racer, which, driven by Kulick, did masterful work, doing the second mile in 1:00 2-5, and covering the five miles in the marvellously



STARTER ARCHIE HUGHES.

fast time of 5:00 4-5, showing the way to the big 35-horsepower Renault, owned and driven by William Wallace.

The 60-horsepower Pope-Toledo, running behind which Oldfield met with his accident at St. Louis, also did good work, A. C. Webb driving with rare skill, challenging the big Flying Dutchman, as the Bowden machine is called, and beating out the Renault handily in the last mile of the five-mile open, and defeating the Stanley in the second heat of the ten-mile free-for-all.

In the touring car classes the Pope-Toledos also did good work, A. S. Lee winning the special match race, with A. E. Morrison driving the Peerless, in the good time of 6:35 4-5, though Morrison had coil trouble and quit after the first mile.

Again, in the five-mile match race, the Pope-Toledo showed in front, winning in the fast time of 5:58 2-5.

Of the other events the special races for stock cars of one particular make were as tiresome as usual, the obvious advertising



REFEREE CHASE, S. M. BUTLER, SECRETARY A. C. A., AND ELIOT FLINT, R. I. A. C.

nature of these processions being too much for the average spectator. The trade and sport were well represented, among those present being M. L. Goss, of the Baker Motor Vehicle Co.; W. E. Metzger, of the Cadillac Automobile Co.; James Couzens, of the Ford Motor Co.; C. E. Walker and Arthur Pope, of the Pope Mfg. Co.; J. H. McAlman, Locomobile Co of America; Harry Fosdick, E. A. Gilmore, of T. B. Jeffrey & Co.; Messrs. Woodard and Bradley, Diamond Rubber Co.; Charles McCutcheon, American Roller Bearing Co.; Harlan W. Whipple, president A. A. A.; Clifford Haskins, Cleveland A. C.; S. M. Butler, secretary A. C. A. Dr Julian A. Chase, president of the Rhode Island Automobile Club, served as referee,



THOMAS McCUTCHEON, OF THE AMERICAN ROLLER BEARING CO., WATCHING THE CARS ROLL BY.

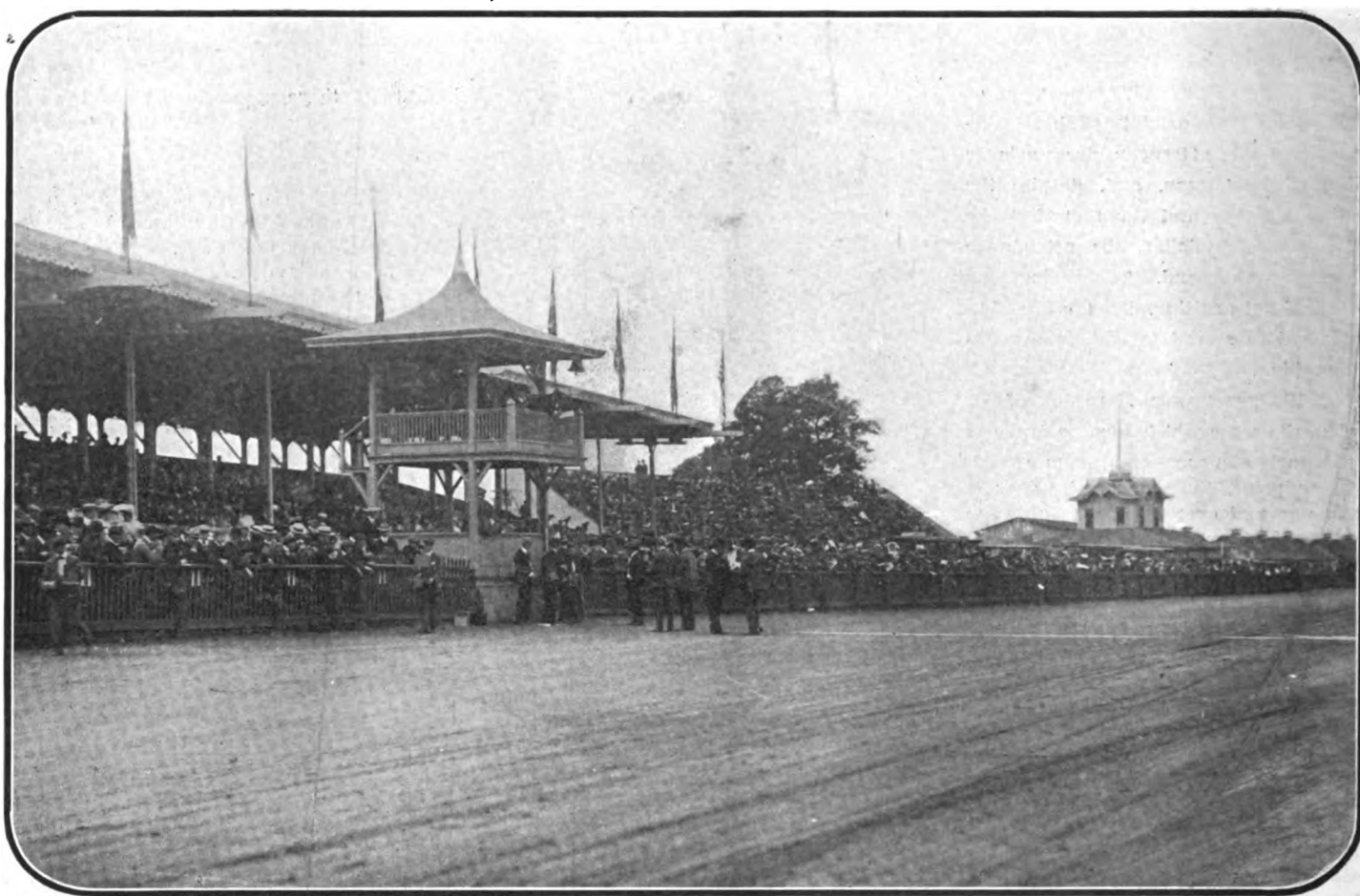
and Archie E. Hughes, now of Providence, but until recently "of the world," made his first appearance as a Rhode Islander. He acted as starter and played the part well.

Summaries:

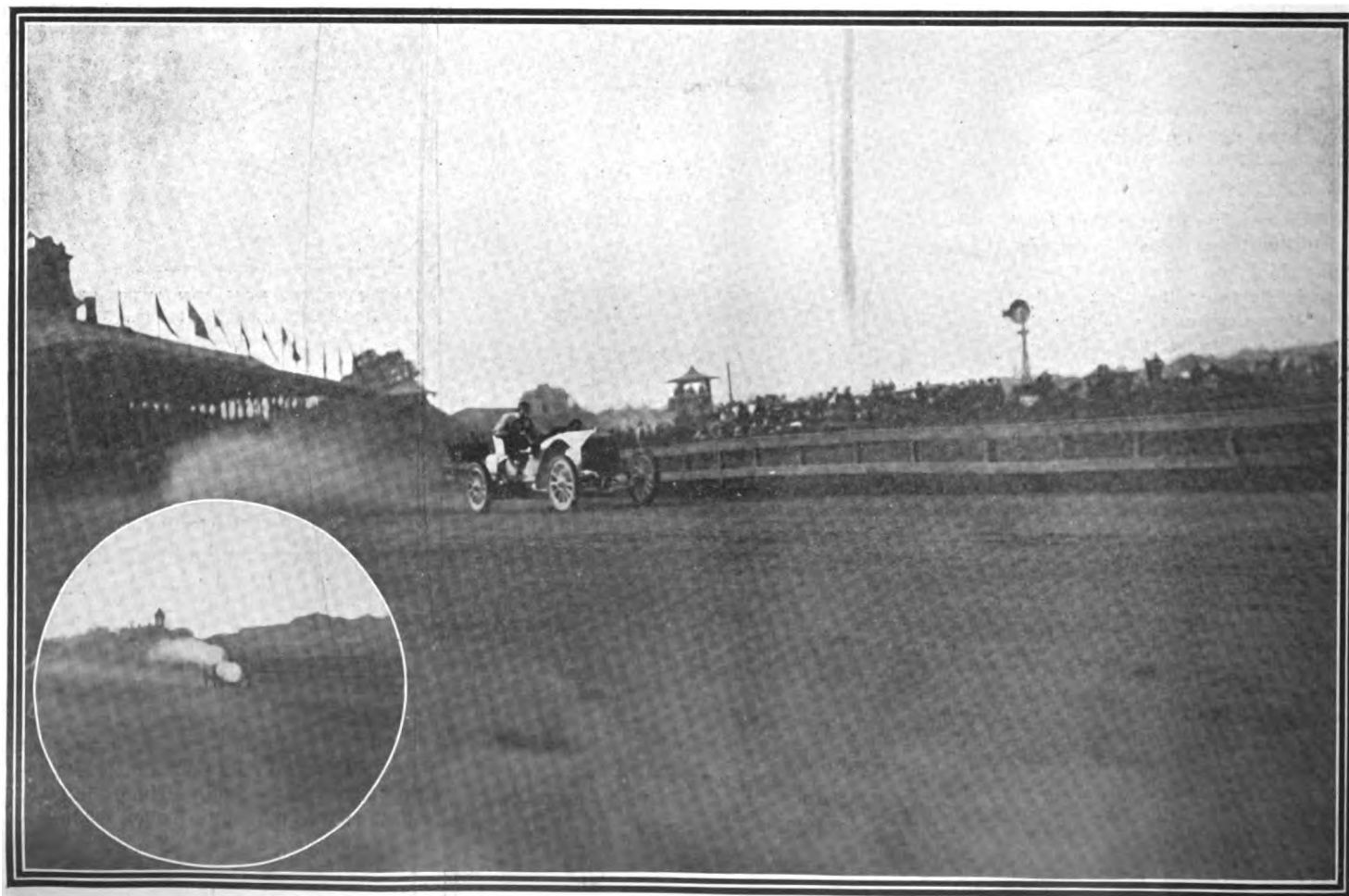
One mile, for electrics—Won by W. B. Snow (Rhode Island Electromobile Co. special); James M. Clarke (2½-horsepower Waverly), second. Time, 2:15.

Five-mile, for gasoline cars from 551 to 881 pounds—Won by Frank Kulick (20-horsepower Ford); F. F. Cameron (10-horsepower Cameron), second. Time, 5:27 2-5.

Five-mile, for gasoline cars from 881 to 1,432 pounds—First heat won by Joseph St. George (30-horsepower Renault), owned by William Wallace; F. F. Cameron (10-horsepower Cameron), second. Time, 5:21 3-5. Second heat won by Frank Kulick (20-horse-

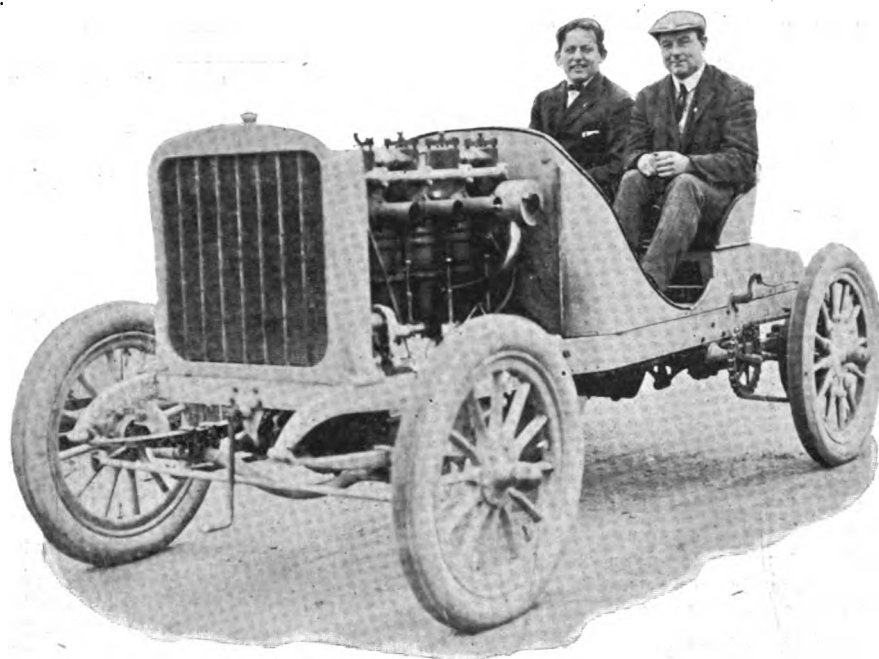


THE CROWDED GRANDSTAND AND THE LONG LINE OF "RAIL BIRDS."



ROSS IN THE STANLEY
STEAM CAR.

BOWDEN'S 60-HORSEPOWER MERCEDES, BASLE DRIVER, WINNING THE 10-MILE
FREE-FOR-ALL RACE.



THE TWO POPE CRACKS, A. S. LEE AND A. C. WEBB, IN THE 60-H. P. POPE-TOLEDO.

power Ford). Final heat won by Kulick; St. George, second. Time, 9:09 1-5.

Five-mile match race between A. E. Morrison (24-horsepower Peerless) and A. S. Lee (24-horsepower Pope-Toledo)—Won by Lee. Time, 6:35 4-5.

Five-mile exhibition by Thomas Fetch (22-horsepower Packard). Time, 6:43 2-5.

Five-mile match race between A. S. Lee (24-horsepower Pope-Toledo) and H. E. Rogers (24-horsepower Peerless)—Won by Lee. Time, 5:58 2-5.

Five-mile, for 7-horsepower Stevens Duryea machines—Won by C. D. Snow; W. J. Chapman, second. Time, 7:44 2-5.

Five-mile, for 10-horsepower Franklin cars—Won by Dr. Walter L. Munro; R. Lincoln Lippitt, second. Time, 8:37 1-5.

Five-mile invitation, touring class, full road equipment—Won by A. S. Lee (24-horsepower Pope-Toledo); J. A. Foster (24-horsepower Winton), second. Time, 6:13 2-5.

Five-mile, for machines from 1,432 to 2,204 pounds—First heat won by Charles Basle (60-horsepower Mercedes), H. L. Bowden owner; A. C. Webb (60-horsepower Pope-Toledo), second. Time, 4:50 4-5 (world's track record). Second heat won by Joseph St. George (30-horsepower Renault), William Wallace owner; Frank Kulick (20-horsepower Ford), second. Time, 5:14 3-5. Final heat won by Basle; St. George, second. Time, 4:41 2-5 (world's track record).

Ten-mile free-for-all—First heat won by Charles Basle (60-horsepower Mercedes), owned by H. L. Bowden; Louis S. Ross (18-horsepower Stanley steamer), second. Time, 9:23 4-5 (world's track record). Second heat won by A. C. Webb (60-horsepower Pope-Toledo); Frank Durgan (8-horsepower Stanley Special), second. Time, 11:02 3-5. Final heat won by Basle; Webb second. Time, 9:13 (world's track record).

Five mile, for steamers—Won by Louis S.

Ross (Stanley); Frank Durgan (Stanley), second. Time, 5:08 3-5.

Who Fired the Shot?

Three exuberant individuals attired in automobile togs, glasses and all, but without a machine, walked into the middle of Exchange Place at 9:50 last night, and after emitting a few blood curdling yells fired three shots from a revolver in the air, reports the Providence Journal of Sunday last. After this fusillade they ran to the Union Station and climbed aboard the 10:07 train for Boston.

Dillon Won Warsaw Road Race.

The first of a series of road races arranged by the Warsaw (N. Y.) Automobile Club took place September 10, the course being to Pearl Creek and return, a distance of seventeen and one-half miles. W. P. Rumbold started at scratch; F. J. Dillon had a handicap of 2 minutes and 33 seconds; L. A. Cass, one of 3:24; Warren McCannon, 3:45; Mr. Long, 5:06; E. M. Cowdin, 10:12. The time over the course was as follows: Dillon, 39:57; McCannon, 49:55; Cowdin, 52:57; Rumbold, 53:38; Long, 59 flat.

Deadly Duel Fought Over Politics.

No French duel, with bowing, scraping and harmless interchange of sword passes, was that fought by two Americans in the gay city on the Seine a couple of weeks ago. If reports are to be believed—and who can doubt them?—it was a serious affair, sanguinary and intended to be to the death. A French witness characterized it as "bloody and brutal," and lamented the spectacle of two brave men thus making mincemeat of each other.

"Two automobiles halted in the middle of the road, facing each other; they completely blocked the way, with its high banks on either side. The chauffeurs of the two ma-

chines (elderly men) were in a stormy altercation. One yelled at the other, and the latter, throwing on all his power at once, his machine leaped forward and gave the other machine a titanic ram. The force of the awful impact drove the two automobiles apart, whereupon the furious chauffeur of the rammed machine now threw on all his power and smashed into his assailant's machine with a roar that could be heard afar; again and again was this action repeated, both chauffeurs swearing like pirates. Finally the machine of the first assailant dashed into the other with such irresistible and terrific force as to carry both machines over the embankment and down the sides to the bottom, where both were completely demolished."

The two combatants were picked up and carried to a hospital, where they were found to be seriously but not fatally injured.

It transpires that their dispute was a political one. They quarrelled, first, over the respective merits of Roosevelt and Parker, and then over the choice of weapons for their duel to death. One wanted Winchesters, the other revolvers; in the end, as stated, they compromised on automobiles.

Makes Good Bennett Race Deficit.

At a meeting at Frankfort last week, held to consider the report of the financial committee of the Automobile Club of Germany by subscribers to the guarantee fund of the international cup race, it was decided to pay the deficit of 80 per cent.

The Automobile Club undertook that any profits made by any future undertakings are to be handed over to the guarantors. It was further agreed that if the international cup race of 1906 be run in Germany and result in a financial surplus this will be paid into the guarantee fund.

Fast Indianapolis to Cincinnati Run.

A fast run between Indianapolis and Cincinnati was made by Sid Black of the former place last week. He left Indianapolis in an Oldsmobile runabout at 3:30 in the afternoon, and reached Cincinnati exactly at midnight. The distance, 139 miles, was made in eight and one-half hours without a stop. At Richmond two gallons of gasoline and some water were taken aboard without stopping the engine or the car, and the engine never made a skip for the journey. Six and one-half gallons of gasoline were used.

Solid Tire's Remarkable Record.

A case is reported where a solid rubber tire on a heavy truck was run thirty thousand miles. When fully loaded the vehicle weighed nearly two and one-half tons. This would seem to upset the view that the life of solid rubber tires, no matter how good or so ever skilfully compounded, is short.

In driving cattle through the streets in Philadelphia recently steers attacked two automobiles. Is this an argument for discontinuing the popular red finish?

DRUMMER'S LONG DRIVE

Salesman for Pork and Beans Concern Makes 1800 Miles Journey to Salt Lake.

An eighteen hundred mile journey, in which business was combined with pleasure, was successfully accomplished a short time ago by three Denver, Col., people. They left Denver for Salt Lake City, and drove through Colorado, New Mexico and Utah. Mr. and Mrs. W. B. Cook and Louis Jacobs comprised the party, and the trip was made without accident or mishap.

Cook is agent for a large Eastern packing house, and spent an hour or two in each town to secure orders.

The car used was a Rambler touring car, which carried on each side large, glittering signs, advertising in an attractive manner the pork and beans sold by the concern.

The first important stop was at Colorado Springs. From there they journeyed through the famous Ute Pass to Cripple Creek. Going from Cripple Creek to Victor they went up over Beacon Hill, where the grade exceeds 30 per cent. It takes twenty-four horses to pull an ore wagon up this road, so steep is the way. From Pueblo a side trip was made to Trinidad. Not more than a dozen houses were passed in the entire distance of fifty-six miles. At Aguilar, a small place near Trinidad, a cloudburst struck them, which nearly carried them away.

After leaving Pueblo the difficulties increased, and at Buena Vista bets were freely offered that the machine could not be driven to Leadville. Several other automobiles had attempted this trip, but had been stalled in the deep sand. Cook met with no unusual difficulties, however.

After leaving Leadville they climbed Tennessee Pass, which, they had been told, would be the hardest obstacle of the trip. It proved easy, compared to difficulties encountered later on. The steepest part, where the grade was 26 per cent, lasted only two hundred yards, and would not have been difficult of ascent had it not been for the sharp, flinty rocks composing the roadbed. These played havoc with the tires, for later, near Rifle, the rear tires gave out.

From Leadville west the roads were bad. Shelf roads, blasted at a great expense out of the solid rock on the mountain sides, were the rule near Glenwood Springs. The way was often so narrow that the passing of other vehicles was a constant source of anxiety. At many places the road could be seen for some distance ahead as it wound about and the passing places could be figured to a nicety. These occurred at half-mile intervals. The "chug, chug," of the machine's exhaust could be heard by drivers quite a distance in the still mountain air, so teamsters could stop at passing points and wait for the automobile. It proved a thrilling experience to ride along one of these shelf

roads, with the mountainside towering above on one hand and falling away a sheer precipice of several thousand feet but a few inches from the wheels on the other side.

In Western Colorado many ravines were encountered on the roads. These were from ten to thirty feet deep, and were V shaped. Drivers of wagons would rush down one side and then whip their horses up the other. The automobile could not "rush" the ravines in this manner, because at the bottom of each was a chuck hole, which would break the spring if the machine struck it at full speed. Cook had to let the automobile slowly down one side by means of the brake, and then laboriously drive it up the other side a foot at a time. The engine would be put at full speed, the clutch thrown in, which would bring the automobile forward about two feet. Then the engine would stop and a block would be slipped under the rear wheel to keep the car from dropping back. Often, however, the machine would slip back a foot for every two feet advanced.

Near Grand Junction the party drove through the Bad Lands, where the heat was so intense that it burst the gradometer attached to the machine. On the last day's drive through this country the three occupants of the rig drank ten gallons of water, being continually thirsty.

Good roads were encountered in Central Utah, from Provo to Salt Lake.

Canvass Mining Section in Auto.

The Schuylkill, Pa., Democratic county candidates, including H. O. Haag, the Congressional nominee, and the candidates for county and legislative offices, will likely make their canvass of the county in automobiles.

By this method they will be able to reach every section of the county. In the early morning they will greet miners on their way to work; during the height of the day they will talk with the farmers and the business men in the towns, and in the evening they will again be able to greet the miners on their way home from work.

The plan has advantages of expediency in bringing the candidates in contact with the miners which commend it to party leaders.

Physician Sues Police for False Arrest.

Dr. J. Finley Bell, an Englewood, N. J., physician, has instituted suit for \$5,000 against Policeman Greber, of Hackensack, for false arrest. Dr. Bell was traveling through Hackensack in his automobile recently, when he was arrested by the policeman for not displaying a license number. The doctor had applied for a license, but through some misunderstanding had not received it. He was fined \$15 by a justice of the peace, who subsequently reversed his decision on finding that a new law making it compulsory that arrests for such violations be made by warrant only. Dr. Bell, who was accompanied by his wife, says that his treatment at the hands of the policeman was outrageous.

GUARD ARRESTS COMMISSIONER

French Functionary's Automobile Was on Forbidden Ground at St. Louis Exposition.

The French commission to the St. Louis Exposition ran afoul the rules governing automobiles last week. The members of the commission were visiting the French section in the Manufactures Building and left the automobile outside.

A Jefferson Guard noticed it was on forbidden ground and ordered the man in charge to take it to the pound. In vain he explained that it belonged to the distinguished representative of a great and mighty foreign republic. The guard knew only that the automobile was occupying a space forbidden in his orders and that it was not properly tagged to even be on the drive where it then stood. He took charge, and in fifteen minutes it was in the pound.

There was some excited talk when the commissioners learned of the fate of their machine, and some choice French exclamations. It resulted in a call upon the officials of the exposition, but, be it said to the lasting credit of the Frenchmen, that when the matter was fully explained to them they commended the zeal of the guard.

Peculiar French Numbering System.

Further details of the system of numbering in vogue in Paris make clear the predicament which confronts the authorities in consequence of the great increase of automobiles.

At first all cars capable of attaining a speed of over thirty kilometres (nineteen miles) an hour were allotted one of the following letters: E, G, I, U, X and a number up to 999, the series thus providing identification number for 4,995 cars. These were soon exhausted, and a second series of 4,995 cars was provided for by doubling the number of letters thus: EE, GG, II, UU, XX. Once again the supply of available numbers is nearly exhausted, and in order to be prepared for further additions provision is being made for numbers for no less than 40,000 cars. This is being done by adopting a small figure after the index letter thus: 999 E2. When this number is reached the index letter will be changed to E9, and so on for each 999 cars to E9, the sequence being afterward repeated with the other letters.

Paris to Have Transmission Tests.

An interesting series of tests is to be inaugurated in October next at the Laboratoire des Essais Mecaniques of the Conservatoire National des Arts et Meier in Paris, viz., a comparative trial of the mechanical efficiency of the transmission mechanism in different types of automobiles. The object of the tests is to ascertain the system of transmission which shows the least loss of power between that developed by the motor and that given off at the road wheels of the car.

WRANGLE AT MILWAUKEE RACES

Runover is Followed by Protest Against Award of the Trophy to Winner.

Poor management, unexciting finishes and a wrangle ending in a threatened lawsuit over the possession of the trophy marked the races run at the State fair track, Milwaukee, Wis., on September 9. There were two automobile events, one motorcycle and a number of bicycle races, all run promiscuously late in the afternoon after the horse racing had been finished. A large crowd was in attendance, but it thinned out before the events were all run, owing to the lateness of the hour. The events were preceded by a parade starting from the Hotel Pfister, in which about seventy-five cars took part.

The first race, at ten miles, was run twice. Three cars were entered, but because of a misunderstanding Weber's Pope-Toledo did not start. Jones's four cylinder Peerless and Arthur Gardiner's two cylinder Rambler participated. Fred Tone drove the Peerless, and made a runaway of it from start to finish. The time for the ten miles was 13:44½.

John Rickey, of the Orlando Weber company, protested because his car was not permitted in the race. It was decided to run the race over, and the Peerless and the Pope-Toledo started. Tone drove the former and Charles Soules the latter. The machines made a pretty race the first mile, with the Toledo a few lengths in the lead. The Toledo increased her lead in the second, and when the Peerless came under the wire Driver Tone motioned that he was running the machine on two cylinders. In the third mile Tone dropped out and Soules finished at five miles, covering the distance in 5:58. The second mile was made in 1:07. Tone protested against the award of the trophy and threatened a lawsuit.

The second race was for light cars, the distance being ten miles. The starters were George Odenbrett (Franklin), Arthur Gardiner (Rambler), and a White steam car. Odenbrett finished the first mile with a small lead, the White was second and the Rambler third. The White dropped out in the second mile and the Rambler quit in the third, leaving Odenbrett alone to finish the five miles, which he covered in 7:27. The fastest mile was covered in 1:26.

Eight motorcycles started in the first event for those machines, a five-mile race, and Sampson, on an Indian, won the race, with Frank Zerbls, on a Mitchell, a close second. It was a pretty race, but was confined to Sampson and Zerbls, the other machines dropping out. The time was 6:50.

One Good Race at Nashua.

The little race meet held at Nashua, N. J., on September 8, in conjunction with the State fair, was saved from tameness by the free for all contest. It was productive of good sport, while the other three events were of the processional order, dreary and dull.

Lewis Ross, in a Stanley steam car, won in a close finish with A. E. Morrison, in a 24 horsepower Peerless. All the races were at five miles. The summary:

Class for steam cars, any horsepower—Won by Lewis Ross, Newtonville, 8 horsepower; Joseph Marriott, Newton, 6 horsepower, second. Time, 2:10½.

Class for gasoline cars, 16 to 24 horsepower—Won by A. E. Morrison, Boston, 24 horsepower; second, K. A. Skinner, Boston, 16 horsepower. Time, 8:56.

Free for all—Won by Lewis Ross, Newtonville, 8 horsepower steam car; second, A. E. Morrison, Boston, 24 horsepower gasoline car. Time, 8:15½.

Gasoline car, not exceeding 16 horsepower—Won by K. A. Skinner, Boston, 16 horsepower; second, S. H. Baker, Boston, 16 horsepower. Time, 9:35½.

Physician Explores Maine Backwoods.

Dr. Elliot Johnson, of Newark, N. J., reached home last week from a fifteen hundred mile touring trip through the New England States. Dr. Johnson's journey took him into the backwoods of Maine, in a section where an automobile had never preceded him. The horses met with in this district were frightened at the strange vehicle and trembled and squealed with fear. In one hamlet a delegation waited on Dr. Johnson and would not allow him to enter the town with his automobile.

Ten days were spent in the backwoods hunting and fishing, and then the return journey was begun. Thirty days was taken to complete the fifteen hundred mile trip. Dr. Johnson used a 1904 Oldsmobile runabout, and throughout the entire journey had no trouble whatever, not even a punctured tire. Some steep hills were encountered on the trip, but they were climbed successfully.

Brattleboro to Have Auto Exhibit.

In connection with the Valley Fair, to be held at Brattleboro, Vt., September 28 and 29, an automobile exhibit will be held, under the auspices of the Brattleboro Automobile Club. The fair attracts an attendance of thirty thousand people, and it is felt that no better way of familiarizing people with the new vehicle can be found than this. A number of applications for space have already been received, and a successful exhibit is assured.

Chicagoans Will Race on Harlem Track.

Chicago's fall race meet will be held on September 30 and October 1—the same dates as the Pittsburg races. The Harlem track has been selected by the Chicago Automobile Club, which has the matter in charge. F. C. Donald is chairman of a committee of three appointed to take charge.

Two Days Meet for Pittsburg.

Two days will be devoted to the meet which the Automobile Club of Pittsburg will hold at Brunots Island. The dates decided on are September 30 and October 1. Eight events will comprise the programme, which is now being prepared.

BRITISH SMALL CAR TRIALS

Thirty-four Contestants Start, Including Three Americans—Many Stoppages Reported.

England's annual reliability test began this year on Monday, August 29, and came to an end on the following Saturday. This year a radical departure from previous programmes was made. The test was confined to light cars, instead of, as in the past, being open to all weights. Division was made into four classes, based on list price. Class A was for cars listing at \$625 or under, Class B between \$625 and \$750, Class C between \$750 and \$875, and Class D between \$875 and \$1,000. In all, thirty-eight cars were entered, only three of them being for Class A, while seventeen belonged to Class D. The entries included three American cars, viz., two Oldsmobiles—a runabout and a light touring—and a 9½-horsepower Cadillac.

Headquarters were established at Hereford, and two runs, averaging a little over fifty miles each, were made daily, making a total of 615 miles for the week. Awards were based on non-stop performances, the car making the largest number of these being declared the winner; if two or more cars made an equal number the award would be made to the car making the best showing in the hill climbing contests, of which there were three. The first was up the Hereford side of Dinmore Hill, a climb of 5,340 feet, and a total rise of 282 feet. The average gradient is 1 in 18.93, and the steepest part of the ascent is 100 feet, or 1 in 10.78. The Leominster side of the same hill was also climbed. This is 4,800 feet in length, with a total rise of 283 feet, the average gradient being 1 in 16.9. The steepest part of the hill is fifty feet, or 1 in 10.84. The third hill is Frome's Hill, 2,812 feet long, with a total rise of 230 feet. It is much the steepest of the series, the average gradient being 1 in 12.2, and the steepest grade consists of 100 feet, or 1 in 7.99.

Only four cars were missing when the start was made. The others were sent off in good order. Although the day's course was an easy one, the casualties were numerous. In the morning ten cars made enforced stops, while in the afternoon eleven more were equally unfortunate. The same afternoon the first hill climbing contest took place, that on the Dinmore Hill. Nearly all the cars acquitted themselves creditably, the Oldsmobile light touring car going up at the rate of 11.2 miles per hour.

Among the absentees on Tuesday morning were the Olds runabout and the Cadillac. The former had experienced trouble with its water pipes, but continued the journey later in the day. On Tuesday afternoon the second Oldsmobile broke a chain and thus spoiled its non-stop record.

A large crowd had gone from Hereford to the Frome Hill, expecting to see some interesting sights. In this they were not disappointed, for a number of cars failed on its steep slope, and various expedients were resorted to in order to get up. Passengers were dropped out, cars were reversed and finished the journey backward, and a gang of laborers were made use of to push some of the cars up.

COMING OF THE CHEAP CAR

Will be Featured by the French and English Industries—Autos for Military Manœuvres.

Paris, Sept. 2.—After having the field pretty much to itself, the powerful touring machine is now being overshadowed by the oncoming of the cheap car, or, to give it a more suitable definition, a low priced car that is cheap in upkeep.

The cheap car has always been with us, for it was naturally the first thing the innumerable small outside firms turned to when they tried to get a footing into the new industry, and probably nothing has done more harm to the automobile movement than the flooding of the market with those little cheap and nasty vehicles that ran badly and could never be relied upon and were a constant source of expenditure and worry to the unfortunate owners. The makers, who thought that the building of small cars was just as easy as the manufacture of bicycles, very soon found that they had grappled with a problem that could only be properly solved by patient experiment and long experience. It is more difficult to build a thoroughly reliable little car at low cost than a high powered expensive vehicle.

The construction of the latter has settled down into definite grooves, and is carried out by recognized methods in which there are no longer any secrets, and as the biggest firms in the country are specializing the production of frames, motors and gears, there is nothing to prevent a conscientious firm, with ordinary experience, from turning out good cars if only they can get round them the proper class of men. With the low priced car, on the other hand, the necessity of building cheaply so far limits the engine power that it is impossible to get satisfactory results out of such vehicles, unless the power developed is employed in moving the car without too much of it being absorbed in the gears. The question of transmission gears is, in fact, of much more importance in the small car than in the big vehicle, where there is always a sufficient reserve of power, and it is fairly certain that the problem of the cheap car will only be satisfactorily solved by the adoption of economical transmissions. Of course, it follows that quality cannot be sacrificed in little vehicles any more than in the big cars, and there is no reason why firms who lay themselves out specially for the production of little carriages should not, by giving close attention to the requirements of these cars, supply the large and ever growing demand for small and economical automobiles.

The cheap car is attracting more attention in England than it is in this country. The French automobilist is generally a man of means, and takes to driving for his own pleasure, while the commercial and business classes see no immediate necessity for adopting mechanical locomotion, and are content

to wait until makers can supply them with something more suitable to their needs than they are able to do at present. In England, on the other hand, where the use of powerful cars is limited by speed restrictions, there is a tendency to look at automobiling from a purely practical standpoint, and as this point of view interests every class of the community, the movement is attracted more particularly to the development of the light and cheap car. The importance attached to this question is seen in the trials now being held in the Midlands, where the cars have to accomplish twenty-four non-stop runs of fifty miles each. The English makers are evidently wise in looking particularly to this branch of the industry, for the country that obtains a supremacy in the construction of low priced and reliable vehicles will in time be securing a very large share of the world's trade in automobiles.

So much has been done in the way of improving the small car, and so many new firms have entered upon this branch of the motor industry, that the low priced vehicle suited to the requirements of the man of moderate means is likely to be a special and interesting feature at the forthcoming Paris show. It goes without saying that this show will eclipse everything else that has preceded it. The difficulty of finding sufficient room in the Grand Palais last year to accommodate all the exhibitors has compelled the organizing committee to provide for an overflow, and they have therefore secured the Horticultural Palace, on the same embankment, a few minutes' walk from the Grand Palais. All the machinery in motion, as well as the motor boats, will be relegated to the Grand Palais, and as the lower part of the building is on a level with the water, it is intended to give buyers an opportunity of testing the boats, while it is also proposed to hold races on the river. The first list of entries, just published, includes the names of several American firms; the first entry to be received was from the Pope Mfg. Co., so that there is every hope of the American industry being suitably represented in the Paris Exhibition, instead of being limited, as was the case last year, to one firm.

We have now entered upon the period of military manœuvres, when all the countries in Europe are putting their armies into the field to play at war, and as these occasions are always taken advantage of to experiment with every new device that will assist in the gentle art of killing neighbors it is only natural that special prominence should be given to the motor car. In this country all army men on the reserve who possess automobiles have been requested to place them at the service of the military authorities. The owners, of course, drive their own cars and have certain privileges, not the least of which is that they are able to follow the manœuvres under very pleasant conditions instead of being obliged to tramp the whole day with gun and knapsack. Besides this, they receive a certain sum each day for the use of the car. In Germany motor cars have been used for some time past

for the transport of the staff, and this year it has been decided to call in the aid of thirty-four motor bicycles and twenty-two racing motor cars. The German authorities are the first to see that there is any military value in the racing car, and it is quite easy to imagine that they would be of considerable service when it is necessary to open communication over long distances. This is an argument in favor of powerful racing machines that no one has yet thought of bringing forward. In Italy also motor cars are being employed for the first time in the military manœuvres, and are utilized principally for hauling guns and carrying food supplies to the camp. So far as the manœuvres have gone, the cars have done excellent service, and have given entire satisfaction to the military authorities.

The value of hill climbing tests is so fully recognized that they have come into considerable prominence since the limitation of speed events on the level, and the makers themselves regard a victory in a long hill climbing test as of more value than the winning of short speed tests. The car that can climb a long mountain road at the rate of something like thirty miles an hour must possess qualities of a far more valuable character than are necessary to win a mile or kilometre test. The climb this week, for instance, up the Ventoux gradient was the hardest test of efficiency of engine and gear that could possibly be devised. Having a length of thirteen and one-half miles, the road is one of the most difficult that can be selected, not only on account of the gradient, but also the sharp turnings and the loose character of the surface over a part of the course. The record for this climb was beaten by a Turcat-Mery car, driven by Rougier, who climbed the thirteen and one-half miles of mountain road in 21:12, beating his former record by 3½ minutes. About half a minute separated Rougier from Duray on a Darracq car, and the third was a Darracq light car driven by Hemery. The Hotchkiss of Leblon was fourth, followed by the Fiat of Lancia. Altogether ten vehicles climbed the mountain in less than half an hour.

A very strong claim is being put forward just now in favor of Aix-les-Bains as the centre for the elimination and Bennett Cup races in 1905. Aix-les-Bains is a fashionable health resort in the Savoie, where the mountainous country allows of an ideal course being carried out for a race in which it is intended to test the cars on severe gradients as well as on the level. The Automobile Club of France is of the opinion that the Bennett race will give much more valuable results if the cars are tested for resistance as well as for speed, and as it is said that there is a perfectly straight stretch of about twenty miles on a route which has been selected of eighty-seven miles, the proposed course seems to fulfil all the conditions required. Aix-les-Bains is ready to guarantee the organizing committee against financial loss, and will also provide attractions for visitors in the shape of automobile and motor boat fetes. It is, of course, by no means certain that Aix-les-Bains will be selected by the Automobile Club, but at present it seems to have a better chance than any other centre.

VILE ROADS NO OBSTACLE

At the Manassas Manœuvres General Corbin, in a White Car, Outspeeds His Staff.

Virginian roads at their best are none too good, while at their worst they have a reputation for undiluted vileness. The question of transport, particularly of officers performing reconnaissance and other duties in the recent manœuvres at Manassas was no small one. How Major General Corbin solved it by using automobiles is now history. His testimony on the point of rapidity and effi-

character of the road, arrived at the Stone House before by staff.

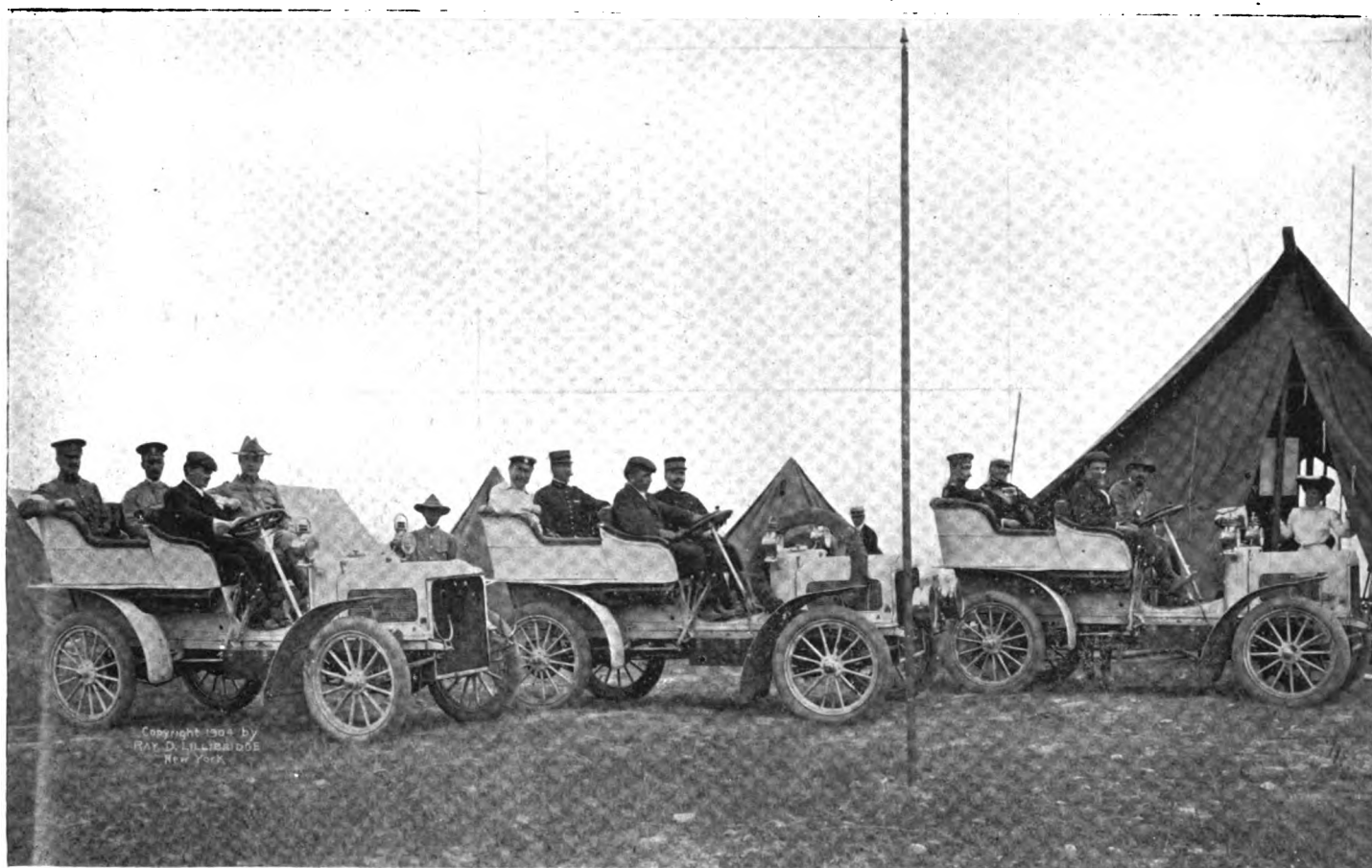
"Germany and France have adopted to some extent automobiles for army purposes, such as for carrying dispatches, etc. From the rapidity with which I personally have been able to move from point to point during the present manœuvres owing to the use of the machines at my disposal, there is little doubt about their utility for quick army transportation purposes."

The three cars are, as will be noticed, the new 1905 models. They contain foreign attachés—English, Germany, Russian, Spanish, French, Canadian, each—and each one is in charge of a competent chauffeur.

"PERFECTION TOUR" PLANNED

Will Take Place at Briton Woods Early Next Month—Banquet to Follow.

In honor of the patronage which motorists have given the White Mountains this summer, and especially as an acknowledgment to those who took part in the "climb to the clouds," the managers of the Mount Washington and Mount Pleasant hotels, Messrs. Anderson and Price, have announced a banquet to the visiting automobilists at the Mount Pleasant on Saturday evening Octo-



1905 MODEL WHITE CARS AT THE MANASSAS MANŒUVRES. THE OCCUPANTS ARE FOREIGN MILITARY ATTACHES WHO VIEWED THE OPERATIONS.

ciency is entirely convincing. Speaking of the White Steam cars used, three of which filled and ready for the day's journey, are shown in the accompanying illustration, he says:

"The usefulness of the White steam cars has been fully demonstrated; they seem to be able to do everything except climb a tree—in fact, I am so enthused regarding their performance at these manœuvres that I feel that they would almost do that. The roads in this section of the country are the worst I have ever seen, but it does not seem to bother the cars in the slightest. This morning, for the final battle, my staff left at 3 o'clock for the Stone House, where I was to secure my horse later. I left my headquarters at 6 o'clock, three hours behind my staff, and, notwithstanding the exceptionally bad

Bishops Toured 6,000 Miles in Africa.

Mr. and Mrs. Courtland F. Bishop were passengers on the steamship Kronprinz Wilhelm, which arrived at New York on Tuesday from Bremen. They have been abroad since early in the year, and have spent their time in touring Europe and Northern Africa in a 20 horsepower automobile.

"We made the entire journey of six thousand miles in a 20 horsepower machine," said Mr. Bishop. "The journey was begun in Northern Africa. We passed through Tunis, Tripoli, Morocco and Egypt. We penetrated the Sahara sixty miles, to Biskra, and created a commotion among the caravans we passed. The chugging of the machinery nearly scared the camels into a stampede. The last stage of our journey was made through France, after crossing the Alps."

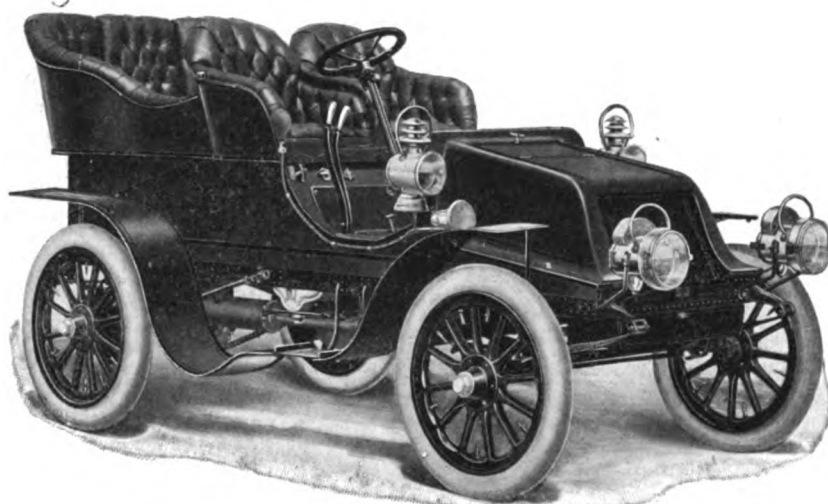
ber 1, to which function will be invited prominent people and speakers.

It is proposed to offer gold, silver and bronze medals for a Bretton Woods perfection tour, for which invitations will be issued to the number of one hundred, and possibly more. The plan is to ask every competitor for the medals to accept an observer as a passenger, newspaper men to act wherever convenient. No scorching or illegal speeding will be permitted, and any competitor arriving at Bretton Woods before a given time will be disqualified.

The tour will start from Boston about September 29, giving two days easy driving to Bretton Woods.

The "Human Terror" is the name now bestowed on the famous "009," which is "doing stunts" at Western fairs.

WINTON



LONG JOURNEY—NOT A STOP.

Mr. A. H. CHADBOURNE tells how he and four friends rode in a WINTON from Philadelphia to Poland Springs, Me., over muddy roads:

"I made the run without one involuntary stop, and although I was using the same five dry cells that came with the car in April, the engine ran perfectly and without missing a single explosion during the trip. No adjustment of any kind was necessary."

NO CAR SERVES SO WELL AS THE WINTON.

\$2500 completely equipped; \$2300 without top;
I. o. b. Cleveland.



THE WINTON MOTOR CARRIAGE CO.

Member A. L. A. M.

CLEVELAND, O., U. S. A.

New York, Boston, Philadelphia, Chicago, London

MADE 86,400,000 EXPLOSIONS

And 43,200,000 Fly-Wheel Revolutions are the "Pathfinder's" Record on St. Louis Run.

After being on the road continuously since May 15, the Elmore car Pathfinder arrived at the factory at Clyde, Ohio, last week. An examination there revealed the fact that despite the car having traversed some seven thousand miles through eleven States, it was still in perfect running shape, and after the batteries had been renewed its speed and power were as great as ever.

A few facts regarding the work the engine has done during the travels of the Pathfinder is of interest to those who do not

more than are used in this entire country on any one Fourth of July.

When these figures are taken into consideration, coupled with the fact that the "Pathfinder" is running to-day just as well as it did when taken off the car at New York City on May 14, there can be no further question as to the efficiency of the two cycle motor. The accompanying photograph, taken at the factory upon the arrival of the "Pathfinder," shows the general outlines of the car, and, incidentally, some Missouri and Illinois mud picked up en route St. Louis to Clyde. The occupants of the car are: Tonneau, H. V. Becker, president of the company, and J. H. Becker, secretary and manager; in the front seat, B. A. Becker, treasurer of the company, and Ralph G. Megargel, who piloted the car through most of its seven thousand mile run.



ELMORE "PATHFINDER" AFTER ITS 7,000-MILE JOURNEY.

stop to consider the immense volume of work an automobile engine has to perform. The Elmore is equipped with a two cylinder motor, which means two explosions to every revolution of the flywheel. The speed of the motor varies from 600 to 1,200 revolutions a minute, according to the grade, mud and other general conditions encountered. Figuring that the car had been run one hundred days at eight hours a day, with the motor revolving, say, 900 revolutions a minute, the flywheel has been revolved some 43,200,000 times, and as it takes two explosions for every revolution, there have been some 86,400,000 explosions in the cylinder.

At Clyde they have figured that the force of these explosions, if taken all at once, would prove sufficient to blow up the largest building in New York City, and the noise, had the muffler been open, would equal the noise created through the explosion of over one million packs of extra large firecrackers,

Made Long Tour Through Europe.

One American whose tour abroad has not received much publicity is J. C. McCoy, of Perth Amboy, N. J. Yet he has only recently completed a journey of five thousand miles in Europe in a 24 horsepower Peerless car, which distance was covered without accident and almost without incident. His route lay through England, Germany, Belgium, France, Switzerland, Austria and Italy.

On the entire trip he had not the slightest trouble with the car. The blowing out of a shoe of one of his Goodrich tires at Geneva was the only untoward incident. Mr. McCoy says that otherwise the tires gave him perfect satisfaction, three of them carrying New Jersey air throughout the entire journey. He carried no extra shoe along, two inner tubes being the only extra tire parts that he had with him.

Mr. McCoy's wife, two sons and a daughter accompanied him on the entire journey.

RUNNING ON STEEL RAILS

**Glidden Car Exceeds Speed of Imperial Limited
—Marked Economy of Operation.**

Some novel experiences have been met with by the Glidden party of transcontinental tourists, who are now on their second thousand miles of travel on steel rails. They found no difficulty in driving their automobiles at speeds of fifty and even sixty miles an hour, and at one time exceeded the running time of the Imperial Limited by ten miles an hour. Indeed, their chief task was to get a clear right of way; they found the traffic on the Canadian Pacific Railroad so heavy that they carried out their schedule only by dint of sprinting on favorable occasions and making quick runs from point to point.

Incidentally, the manifest superiority of the steel rail for traction purposes was demonstrated in an impressive fashion. Mr. Glidden gives it as his belief that fifty miles an hour is as easy to make on rails as thirty-five miles on macadam roads. A marked economy in fuel consumption is also effected. This Mr. Glidden estimates at twenty miles on rails, as against fifteen miles on macadam roads on a consumption of one gallon of gasoline.

The initial ride, taken on the Soo road, was made quite an event by the railroad people. On the experimental drive Mr. Glidden had as passengers E. Pennington, second vice-president and general manager; T. A. Foque, master mechanic, and four other officials of the Soo line.

The first train order ever issued for this class of running on the rails was as follows:

Minneapolis, St. Paul and Sault Ste Marie Railway Company, telegraphic train order No. 26, from Minneapolis, Sept. 3, 1904.

"To McCulloch, conductor, Shoreham: Run extra from Shoreham to Cardigan Junction and return to Shoreham. This order is void at 11:45 a. m. (Signed) W. A. B."

The car was equipped with fire extinguishers, a sand box, red flag, red lantern, torpedoes, red fire and other fireworks.

Except when they had to stop to cool off the boxes, which for some reason gave a lot of trouble, the car ran perfectly smooth, the steel-rimmed wheels taking the curves, switches and frogs with no jar or rocking motion, and the engine ran noiselessly.

An official of the Soo line said the ride in an automobile on the tracks was a luxury greater than he had ever enjoyed. It is the beginning of a new era in transportation, the progress of which will be watched with great interest, he added.

In summing up his experiences upon leaving the Soo line tracks and entering upon those of the Canadian Pacific road, Mr. Glidden said:

"I am satisfied that a motor car can be run from Boston to Chicago at a speed varying from 75 to 100 miles per hour without stopping, making the distance in 12 hours. Mechanical experts who have accompanied me on this run agree in this statement. And so one of the important results of our run on the rails has been made clear."

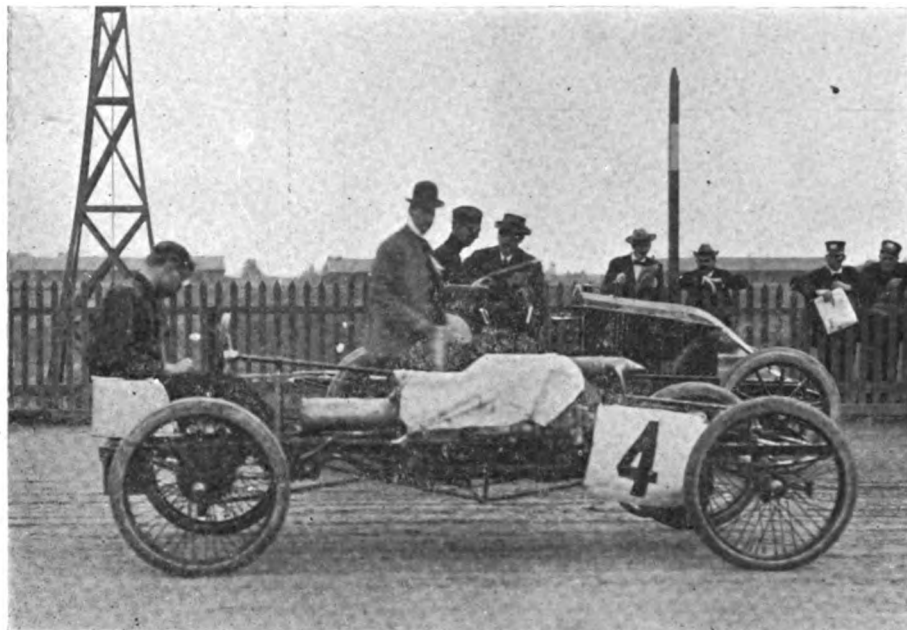
FORD'S FAST FIVE

—MILES IN—

Five Nine and Four-Fifths

(5:09 $\frac{4}{5}$)

WAS EASILY THE STAR FEATURE OF THE
PROVIDENCE RACES LAST WEEK.



The splendid performances of the little 20 H. P. Ford racer, breaking all records for machines of its class and defeating the 35 H. P. Renault, is but one of the many reasons that makes the FORD FAVORITE and the choice of discriminating buyers everywhere.

NOTE.—The 20 H. P. Ford racer contains two motors of the same kind used in our regular stock model machines.

TRULY “THE CAR OF SATISFACTION.”

THE FORD MOTOR COMPANY,

DETROIT, MICHIGAN.

HOW TO GRIND VALVES

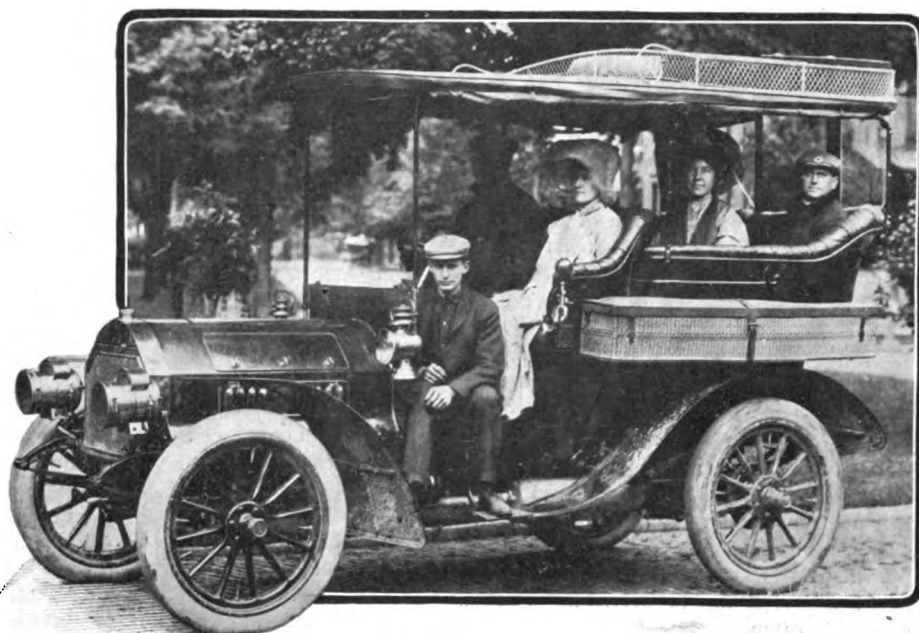
Operation a Necessary and Not a Difficult One—
How to Set About It.

Until a motorist has actually ground the inlet or exhaust valves of his car himself he is likely to entertain an exaggerated idea of the difficulty of the task. As a matter of fact, it is not really difficult at all. Any one handy with simple tools and with even the smallest mechanical aptitude can perform the operation successfully.

These valves all require occasional grind-

between the valve chamber and the cylinder. When the operation of grinding is finished, the waste may be drawn out by means of the string.

The valve should be smeared with the emery and oil mixture, put into place and turned first one way and then the other with a screwdriver. Do not make more than a quarter turn at a time, but do it evenly, exerting very slight pressure. Then lift the valve away from its seat, give it a quarter turn and reseal it, continuing the process of grinding as before. The object of lifting the valve occasionally is to free any foreign matter that might be in the emery powder,



F. A. AYRES AND FAMILY, OF INDIANAPOLIS, IND., IN THE 40-HORSEPOWER PREMIER CAR IN WHICH THEY DROVE TO MAGNOLIA, MASS.

ing, the necessity being first evident by loss of compression. The exhaust valve will require more frequent attention than the inlet, for two reasons—first, its seat is subject to much higher temperatures, because the valve is held open while the flaming exhaust gases are passing to the silencer, and, second, because the valve is usually closed by a very powerful spring.

It is advisable to grind a valve when the first evidence of "pitting" presents itself. If the operation is delayed more grinding will be eventually necessary, and more of the valve seat will be worn away in consequence. The head of the exhaust valve is usually slotted like the head of an ordinary screw, and a screwdriver may be used to turn the valve during the process of grinding, after the inlet valve has been removed.

Very fine flour of emery mixed with oil, to prevent the emery from cutting, should be used. Care should be taken to prevent the slightest trace of this mixture finding its way into the cylinder. A good plan is to tie a bunch of waste on the end of a string and push the waste down into the passage

and also to make sure that the grinding is done evenly throughout.

After having lifted the valve free from its seat four times, and giving it a quarter turn after each, the surface of the valve and valve seat should be carefully cleaned and examined. If the surfaces are perfectly even, with no depression or discolored spots, the task may be considered finished. If not, continue the operation until this result is attained, applying more emery and oil if necessary. Eight or ten minutes of grinding should be sufficient to remedy a bad case of "pitting."

In cleaning the valve and valve seat, use a soft cloth or piece of waste soaked in kerosene, to cut the oil and do the work very thoroughly, removing the last trace of oil and emery before carefully removing the waste from the exhaust passage which was inserted to prevent any emery from entering the cylinders.

The operation of grinding the inlet valve is similar to that described, excepting that the valve and valve seat may be removed from the motor, and the use of a screwdriver will not be necessary, because the valve can be turned with the fingers.

WOULD REVERSE MATTERS

Front Driving and Rear Steering Cars Advocated
as Preventive of Side Slip.

Revolutionary changes would ensue upon the adoption of a remedy for side slip suggested by two English engineers. They ascribe to the driving and the locking of the rear wheels the cause of side slip, and would substitute front driving and rear steering for the present practice.

The rear wheels, being driven and locked, they contend, lose their directive control. When that was the case the motion of the car was unstable, and it swung round so as to face in the opposite direction to which it was moving. By using a model on an inclined plane which had been made slightly wet it was shown that if the locked wheels were in front the car travelled in the right way, but when the rear pair were locked it swung round in the manner indicated. If they locked the back wheels they were sure to come to grief, and this would happen however great or however small was the friction between the wheels and the road. In hind wheel steering the short car had an advantage, and if this method were adopted cars should be short, and not long, as at present. The general conclusion at which they had arrived was that hind wheel driving was objectionable, because driving wheels were very likely to slip. With front wheel driving the motion would be more stable.

It is scarcely necessary to say that the above views, which were advanced in a paper read before the British Association, were strongly dissented from by those present. Nor are they borne out by experience with front steered and rear driven vehicles in this country. A number of electric cabs were constructed on this principle, and some of them are in use to-day. But there is no appreciable difference in their immunity from side slip. Finally, it is indisputable that side slip will occur when a vehicle is running free—that is, when the rear wheels are neither locked nor driven.

Car That Does Double Duty.

Lewis Lawton, a Trenton (N. J.) contractor, has devised a scheme by which he proposes to illuminate his country home with an automobile. He recently constructed a home on the Delaware, too far beyond the city's limits for gas or electric lights, hence his new idea, by which he will make double use of his Waverly electric car.

Before Mr. Lawton returns to his home each night his machine will be charged with electricity. His home has been wired and the machine will be connected with these wires, thereby giving sufficient power to run four clusters of lights. Mr. Lawton will go to his business every morning with his machine, and will use it part of the day, recharging it during the afternoon.

MECHANISM OF CLUTCHES

Importance of Their Functions and the Diverse Nature of Their Duties.

Volumes have been written about clutches, yet many motorists who consider themselves practical have but the haziest ideas regarding them, their construction, duties, etc. They constitute the link between the power and its application to the vehicle to be moved, and upon the success with which this application is made depends the efficiency of the car.

The perfect clutch must also be of extreme delicacy of touch without sacrifice of gripping power; it should take hold without jar or jerk, and should transmit power to the road wheels just in accordance with the degree and method of its engagement. At no time should the ideal clutch slip and shirk its work, no matter what the duty it is called on to perform may be, nor, on the other hand, should it, when asked to start gently, furiously take hold or seize, or, in motor parlance, become fierce.

As the power is increased, the design of a satisfactory clutch is likewise, as a problem, increased proportionately, though curiously, faulty clutch action is chiefly reported by the very small cars. Metal to metal clutches, whether steel to steel or steel to gunmetal (which means a superior kind of brass) are more addicted to variable working than metal and fibre or metal and leather clutches.

In any form of conical clutch, the first matter to be attended to is that the angle of the male and female portion should be the same, or if a margin be allowed, it should be in the direction of giving the male cone a quick bite at entry, as this will quickly right itself in wear, whereas the angle being slightly in the other direction will give a clutch which will be troublesome from the first, and which will not improve with use when the surfaces are metal to metal. Metal to metal clutches are particularly bad under inexperienced manipulation, in which they are subjected to what may be termed sudden jerks or quick engagement or disengagement, because directly the clutch engages and still fails to take proper hold, a degree of friction and consequent heat of surface is set up, resulting in contraction of one part and expansion of another, with general distortion and consequent non-grip or absence of delicacy of touch, so essential to fine control. Leather faced clutches, or, rather, one face leather lined and the other all metal, are to be preferred where the novice is concerned, and the thicker the leather facing the greater the latitude given the driver during the earlier stages of uses, in which, of course, under ordinary circumstances, the driver will improve while the clutch is being improved.

Leather faced clutches, however, display many faults, and consequently various com-

positions have been tried as a substitute, though possibly there is still "nothing like leather."

Vulcanized fibre or vulcanite offers some advantages, but it is liable, if slipping should occur, to melt on the surface from frictional heat, and from this stage the slipping is transformed into a grip which practically cannot be undone.

Leather to metal is perhaps the best for all round work, although the magnetic clutch can claim points on all the others; but the leather faced clutch is bound to be fierce ment. If too fierce, it may be soothed with oil; if too "glib" or slippery from excess of oil, it may quickly be corrected by a dose of gasoline. A new clutch or newly lined leather faced clutch is bound to be fierce for some little time, and will take hold suddenly, putting the transmission gear to severe shocks, but, like all the rest of car mechanism when new, the clutch should receive attention, and, indeed, very especial attention, as, unless the driver is able to depend absolutely on his clutch action, he is powerless with the exception of the brakes. When oil gets on a leather clutch to the extent of causing severe slipping, nothing beats gasoline for quickly restoring proper conditions, and when the reverse fault of over-gripping or fierceness is experienced, ordinary olive or salad oil for some reason or other seems to soothe a clutch better than any other oil, though castor oil is the popular medicine for leather faced clutches.

The perfect clutch should transmit power without shock, and with all the delicacy and gradation of the electric motor; it should not slip when it is supposed to be driving, and should not continue to drive when it has been withdrawn.

Salad Oil Will Do.

Proper lubricating oil is a prerequisite if the best results are to be obtained. At the same time there are a number of expedients that can be made use of at a pinch. To get one home when stranded through a shortage of oil almost anything that goes by the name of lubricating fluid will do; even salad oil has been known to answer when nothing else was available. And, expensive as it was, it proved infinitely better than some of the heavy oils obtainable at chance roadside stores. The latter not only give poor results, but they leave the crank chamber or bearing in bad shape. The proper way is to open the drip cock or otherwise run the residue off and then thoroughly clean the parts by sluicing them with kerosene, so as to have them clean and sweet before putting in a supply of fresh lubricating oil.

Copenhagen Plans an Exhibition.

An international automobile and cycle exhibition will be held at Copenhagen, Denmark, next spring. The Cycle Manufacturers' Syndicate, of Copenhagen, is back of the project, and the exhibition will be held between March 15 and April 9.

DUTY-FREE AUTOMOBILES

Foreign Cars Brought Here for Touring Eligible—Also Those Used Abroad One Year.

In response to a series of questions submitted by the New York Collector of Customs, C. H. Keep, assistant Secretary of the Treasury Department, has again and more clearly than ever stated the exact regulations applying to the entry of automobiles owned by foreign tourists visiting this country or American interests returning from abroad. They are summarized as follows:

1. Automobiles of foreign manufacture brought to this country for touring purposes, whether by foreigners or residents of the United States, and whether accompanying the owners or not, if to be actually used by them in this country, are entitled to free entry under bond, for a stay of three months, under the provisions of department's circular of June 20, 1902 (T. D. 23,808).

2. Under the provisions of T. D. 22,088 of March 17, 1900, automobiles are classed as household effects, if used as such for the period prescribed by law. Automobiles used in business pursuits (T. D. 8,968, T. D. 14,466 and T. D. 23,663) are not exempt from duty, as, under the provisions of paragraph 504 of the act of July 24, 1897, the article must be a part of the household economy. In the case of *Arthur v. Morgan* (112 U. S., 495, and T. D. 8,968, T. D. 13,899 and T. D. 14,466) household effects are defined as "articles which pertain to a person as a household or to a family as a household, and do not include articles used in professional or business pursuits."

3. Automobiles used abroad as household effects as above for a period of one year or more, whether consecutively or not, and whether or not the one year of use abroad immediately precedes the importation, are free of duty upon the filing of the usual oath (T. D. 2,768).

4. Free entry of an automobile is accorded only to the actual automobile used by the owner for one year or more, and cannot be allowed in the case of an exchanged machine which has not been used by the owner for that period.

5. Automobiles are free of duty if used abroad for one year or more, although a period of a year or more may have elapsed since such use (T. D. 2,768).

6. Automobiles to be free of duty as household effects must have been used abroad for a period of one year or more by the owner or his family, whether driven by a chauffeur in his employ or not, but the use of an automobile by a chauffeur or friend unconnected with the owner of his family does not meet the requirements of the law.

Ready Repair for Rubber Connection.

A rubber connecting pipe may be repaired, if leaking or burst, with a tire patch well bound with tape.

CARBURETTORS AND GEARS

Their Defects Discussed and Lines of Improvement Pointed Out by a Foreign Critic.

Some interesting remarks on such important parts of the modern gasoline car as the carburettor, the transmission gear and the wheel base were made recently by the well known transatlantic writer, Mervyn O'Gorman. Relative to the first named, he pointed out that in most types of carburettors an ever increasing jet of gasoline is drawn in proportion to the increased vacuum as the engine gains speed, and he notes in this connection a triple range of evils: First, that more gasoline is wasted than is necessary; second, that a less quantity of mixture gets into the engine, which affects not only its output, but also its compression, and so influences adversely its efficiency, and, third, that the mixture is incorrect, in that it is too rich and still further reduces the efficiency by overheating the combustion head.

To effect a cure three means are open to the experimentalist—first, to partially destroy or impair the vacuum, as in the plan of the automatic air device; second, to blow more air in at the entrance, and, third, to avoid any throttling in the air inlet, and to supply at each stroke the quantity of gasoline required either in a liquid or vapor form, or even up a wick. To correct the above mentioned defects, Mr. O'Gorman has had made a carburettor which effects the auxiliary air operation by means of a blowing in of the required amount of air, and which totally abandons the use of a float, spray or needle valve and the present type of automatic air valve. The apparatus, in brief, merely consists of a gasoline tank and pipe through which air is blown from the crank case through the medium of a wick.

This experimental carburettor has furnished a result which goes to support the author's claims, and in a diagram illustration the results with three types of carburettors—an ordinary spray, one with the addition of the automatic air valve, and the author's own pressure device—were shown. The results are as follows: The simple spray developed its highest brake horsepower—a margin over eight—at 1,600 revolutions per minute; the second gave its best result at 1,700, when the curve line rose appreciably above the other, while the pressure feed carburettor developed considerably more than 9 horsepower at the much increased speed of 1,900 revolutions per minute—a speed that the other two failed to at all approach.

After detailing the claims of this type of carburettor, the author points out that as gasoline is a liquid and air is a gas, the laws which govern the flow of each are different, and the weight of each drawn in does not depend merely upon keeping the degree of vacuum in the carburettor a constant. More is required than this to comply with the essential condition that the correct quality of

the gas be supplied to the motor under the varying conditions of high and low speed.

As every motorist knows, the power developed by the motor is dissipated in varying rates according to the types of gear used to effect the speed reduction necessary for the road wheels, and the presence, or absence, of other frictional causes of power loss that may be considered incidental only to the condition of a particular car. Without reference to this latter cause, Mr. O'Gorman claims that with the "direct" drive, as, for example, on top speed, where the engine drives directly by chain to the wheels (e. g., the Oldsmobile car), the efficiency is upward of 80 per cent of the engine power. In the same way where the drive is direct to a countershaft, thence to the rear axle by chain, the efficiency is upward of 70 per cent, while in other forms of power transmission the friction losses vary from 38 to 50 per cent of the power developed by the engine.

With a view to eliminate as far as possible the "step" or graded scale of change speed gear, the attempt to devise a really efficient and reliable variable speed gear will be watched with interest by makers and users alike. The elimination, even in part only, of the gear box will make for a considerable reduction in the cost of the production of a popular car. Up to the present speed and power have only been possible either by using an abnormally large engine and a comparatively lightweight vehicle, which meant the best quality of material and workmanship throughout, and, as a result, high cost, or a moderate sized motor acting through graded speed changes and all the wear and tear that the owner of the touring car is familiar with.

To take as an illustration the simple two seated voiturette of 6½ horsepower, fitted with the genuine De Dion engine or one of its many copies, and a three speed and reverse gear box. The motor will be worth £40, and the gear box, if properly made, another £20—in all a total of £60. To eliminate the present style of gear box and substitute an epicyclic train of wheels for emergencies in hill climbing and retain the reverse gear would mean the fitting of a motor of almost thrice the horsepower; which would include, to render it as flexible as possible, such devices as a variable control of the inlet valves and an effective carburettor. Such a motor would cost £100, which would not include the extra cost involved in the smaller gear box required on the stronger chassis and details that would probably be necessary to install the highest powered engine. The introduction of a commercially successful variable speed gear will undoubtedly make for the simplification and cheapening of the small car. If practical, and easy of repair and adjustment, it would readily supplant the present type of gear box and change speed mechanism.

The question of the merits of a long wheel base for the popular type of car is one which Mr. O'Gorman thinks is open to discussion. Its advantages, in brief, consist in its effect as an absorber of vibration, the facilities it

affords for increased passenger space without encroaching on the engine room, diminution of side slip and steadier running. The drawbacks, he considers, include increased difficulty when required to rapidly turn, the addition of extra and useless weight, and its liability to set up distortion of the frame. Some of the accepted advantages of the long wheel base are obtainable by the choice of suitable coach type springs on condition that their resiliency is controlled by suitable means. He made an attempt to secure this end by supporting the entire carriage work from one line on the chassis which gave a pivoting or rotating movement about that line, and though the results were not convincing, the road shocks were unquestionably modified into a pleasant movement of an undulating character.

Rain's Effect on Glass Screens.

Motorists who wear spectacles, and whose cars are equipped with a glass wind screen find it easier to see through the latter than to see through wet spectacles. The explanation that first occurs to one is that a drop of rain falling on a lens close to one's eye covers a very large part of the area of vision. But the weak point of this theory seems to be that when the rain is so heavy as to make the whole surface of the glass screen uniformly wet, it can be seen through better than one could see through spectacles if if they were similarly covered by a uniform film of rainwater.

Perhaps the oculist's explanation would be that the glass screen is flat, so that the rain upon it does not distort the angles of vision, but rain upon the lenses of spectacles causes a kind of refraction which destroys the vision-correcting angles at which the lenses are ground.

Economy Adds to Efficiency.

When a motorist has become somewhat expert in the running of his car it will be found advantageous to gradually cut down the gasoline feed until the point at which the motor runs well, but will not stand a further reduction, is found. The smaller the proportion of gasoline the more economically the motor will run and the cleaner it will keep. This can, of course, be carried to extremes and the efficiency of the engine interfered with; but the proper feed can be determined without great difficulty. The same process should be applied also to the cylinder lubrication. When the gasoline and lubricating oil are feeding into the cylinder in the smallest quantities that will produce good results, the motor should run for a long time without fouling the sparking plug and on the minimum amount of fuel.

New Application of Old Word.

"Légere" is a French word, which, since its adaptation to automobiles, has acquired a meaning differing widely from its original one. "Light," "nimble," "quick-witted" are some of the definitions given by the dictionaries; but it is now generally applied to a car of medium power and weight.

Auto Invasion of French Alps.

During the past summer a large number of motorists have taken advantage of the splendid roads and magnificent views to tour through the Alpine regions. Writing of the French Alps, a correspondent says:

"From Allevard, with its sulphur springs and chestnut groves, 1,500 feet above sea level, I came up the perfect wagon road which French public works have terraced dizzily along the narrow, winding gorges of the Romanche to this mountain village at an altitude of five thousand feet. The road is easily practicable. From ten to twenty automobiles pass each day on their way higher up or by short cut over the mountains to the fortified frontier town of Briançon, where Hannibal lost his elephants as he passed over into Italy.

There is even a public automobile service daily from Grenoble to the Sautaret—a bleak plateau a few miles from here above tree level, but with more than 2,000 varieties of Alpine plants, and a waving sea of mountain peaks to stud the eyes' desire. The four places in this automobile for hire must be taken together; the price for the day from Grenoble up to the Col du Sautaret (nearly 7,000 feet high), with a stop of three hours and then back again—fifty-four miles all up and as many all down—is 150 francs (\$30), with a tip to the chauffeur. If you are six in the party you can have a larger car for \$10 more.

I ask myself why these elevated regions, so easy of access and so picturesque and interesting in themselves, have not yet become the stamping ground of such tourists as mount in droves to the highlands of Switzerland. For twenty years the French Touring Club and local Alpine associations in abundance have been working to this end. They have succeeded but moderately, and there must be some other reason for it than the mere snobbishness of fashion.

The chief development has come from the automobiles, which find even in these heights

the superb French roads; and these are wanting in Switzerland and the Tyrol. Here, no matter what the angle of the ascent or how violent the turning, the roadbed is wide and hard and level, kept in perfect order after storms by the resident cantonnier, without ruts or cobbles, with electric lights day and night in the frequent tunnels, and with parapets wherever the mountain sinks abruptly down hundreds of feet from the cornice of the road. Even on the lesser road crossing the peaks of the Galibier 9,000 feet high into the Mont Cenis valley I have seen three automobiles in one day; but this, so an automobiling friend assures me, is sheer folly on account of the steep grade, innumerable sharp turnings, and difficulty of passing when two meet."

Drove 31,000 Miles to Win a Wager.

The wager stage of the automobile has been reached. According to cable dispatches, M. Henriot, a French journalist, and his wife, who have been making a tour of Africa and Europe in an automobile for a heavy wager, have arrived at Geneva from Italy.

The conditions of the bet are that Henriot and his wife shall cover 31,000 miles within a year. He started from Ostend in October, 1903, and since then has passed through France, Spain, Morocco, Algeria, Tripoli, Egypt and Italy to Geneva. He met with many adventures in North Africa, being robbed twice. He has already covered more than 31,000 miles.

Goldschmidt's Gearless Car.

A French engineer named Goldschmidt has brought out a touring car in which there is no gear box or gear. There is only one speed, which, of course, is direct, and by the special methods of throttle, carburation and varying the period during which the inlet valves open, the car can be made to travel at any pace. The reverse is accomplished in an ingenious manner. A second set of cams is fitted which can be brought into operation by the driver, and these cause the engine to run in the opposite direction.

Ready Access to Repair Pit.

A great many motorists underrate the importance of frequent use of the inspection pit. It is seldom that one dives beneath a car without discovering some nut or bolt either loose or so indifferently tight as to be capable of improvement, or else a water-joint evinces signs of leakage, a split pin reveals insecurity, a brake rod or a sprocket-bolt needs adjustment, or some other of the hundred and one little things that are liable to derangement can advantageously be attended to.

The reason for neglect of such frequent inspection is doubtless that the operation of clambering down into the pit and climbing out again is of an acrobatic and clothes-soiling character, so that even the most enthusiastic amateur engineer shirks the task. This state of things would be largely averted if the pit were furnished with a substantial flight of stairs at one end—not a mere ladder, but comfortably graded steps by which access to and egress from the pit would be as easy as walking down and up one's front doorsteps.

Palatial Car for the Pope.

Pius X. has succumbed to the fascinations of the motor car. Hereafter he will have an automobile for his personal use in taking his daily rides through the Vatican gardens. The carriage will have room for two persons inside and a chauffeur and footman outside. It will be painted in the papal colors, white and gold, with the interior upholstered in red silk damask. The Papal coat-of-arms appears on each door. The electric plant of the Vatican will be used to charge the storage batteries.

Quick Time for Tire Repair.

In a recent European race a tire repair was made in a remarkably short time. The cover and tube were removed and a new tube fitted and the cover replaced and the tire inflated in 6 minutes and 20 seconds.



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The Week's Patents.

768,723. Mud Guard for Automobiles. Ferdinand Behre, Morristown, and Ernest C. Lauyer, Jr., Chatham, N. J. Filed Oct. 14, 1903. Serial No. 176,950. (No model.)

Claim.—1. The improved mud guard, comprising a centre piece and a series of ribs pivoted thereto and covered with a flexible fabric, the covering being split open at one side to permit the axle to be brought near to the centre of the guard, and means for fastening said guard to the vehicle, substantially as set forth.

768,736. Variable Speed Mechanism. William D. Custead, New York, N. Y., assignor of one-half to Edward Manrara, New York, N. Y. Filed Jan. 15, 1904. Serial No. 189,098. (No model.)

Claim.—1. Two oppositely disposed cranks set substantially quartering to each other and suitably mounted for rotation; two links mounted for oscillation; connecting rods connecting the cranks and links respectively; pivot blocks adapted to be moved lengthwise of said links and means for such movement; two ratchets, fixed to a revolvable shaft; four reversible acting pawls, mounted for oscillation and adapted for engagement in pairs with each of the ratchets respectively; four connecting links, operatively connecting each pivot block with each two of the pawls respectively; means consisting of cam disks and slides to cause the pawls to engage their respective ratchets to impel said ratchets in one direction, and means to shift the cam disks to cause the pawls to engage their respective ratchets to impel said ratchets in the other direction.

768,807. Gas-Mixing Device for Gas Engines. Ernst Körting, Hannover, Germany. Filed Jan. 5, 1904. Serial No. 187,763. (No model.)

Claim.—1. The combination of means for mixing a neutral gas with a combustible gas in certain proportions to obtain a combustible calorific value, and means for mixing a combustion supporting gas with such combustible gas of reduced calorific value in proportions to form an explosive mixture, substantially as described.

768,866. Speed Regulator for Explosive Engines. Henry Soeldner, East Williamsburg, N. Y. Filed Oct. 20, 1903. Serial No. 177,757. (No model.)

Claim.—1. In an oil engine having a shaft and a wheel thereon, the fuel supply pump mounted on said engine parallel with the said shaft, a movable cam frame at right angles to said shaft and arranged to move back and forth with the pump plunger in line with said shaft, a spring for moving said frame outwardly, a support to rotate with the wheel and having a roller to engage at each rotation of the wheel said cam frame and move the same and the pump plunger inwardly, and means subject to the speed of the engine, for controlling the relation of said roller to said cam frame, said roller being movable toward and from said frame, substantially as set forth.

769,176. Steering Gear for Motor Vehicles. Eugene Mathieu, Louvain, Belgium. Filed April 29, 1902. Serial No. 105,175. (No model.)

Claim.—1. In a steering gear for motor vehicles, in combination, a rod provided with a steering wheel, a worm at the end of said rod, a nut in which said worm is engaged, a split socket inclosing said nut and provided with an angular lever operating the connecting rods of the wheels of the vehicle and means whereby the rod and the worm acting

in the nut may be displaced longitudinally when the rod is rotated by the steering wheel, substantially as set forth.

769,243. Vehicle Tire and Fastener Therefor. William O. Worth, Chicago, Ill. Filed October 27, 1902. Serial No. 128,898. (No model.)

Claim.—1. A wheel tire comprising a base and an elevated integral portion disposed upon the base to constitute a tread of laterally undulating form, the median line of each undulation whereof is obliquely arranged relative to the median line of the base.

769,269. Gear for Belt Driving Motorcycles or Cars. Donald W. McLean, Methven, New Zealand. Filed July 13, 1903. Serial No. 165,304. (No model.)

Claim.—The combination for the purpose indicated of a crank shaft 2, crank 1, a support 4, a toothed pinion 5, upon said crank shaft, the bracket 8, having a slot 12, and means for securing said bracket to the support, the stud 10, adjustable in said slot, an internally toothed wheel 13, carried upon said stud and gearing with said pinion, the rim of said wheel having a groove to receive a driving belt, as specified.

769,321. Clutch. James W. Packard, Warren, Ohio, assignor to Packard Motor Car Company, Warren, Ohio, a corporation of West Virginia. Filed July 7, 1903. Serial No. 164,595. (No model.)

Claim.—In a clutch, the combination with a shaft, of the outer clutch member, the inner clutch member consisting of an expandible metal band located within the outer clutch member and having one end rigidly connected with a hub mounted on the shaft, a longitudinally movable rack on the hub, a lever fulcrumed on the hub and having one arm connected to the movable end of the expandible band and its other arm engaging an adjusting screw, and a pinion meshing with the rack and adapted to turn said screw to expand or contract the expandible band, all of said parts being arranged within the space bounded by said band.

769,401. Running Gear for Vehicles. Edward J. Pennington, Cleveland, Ohio, assignor to William J. Morgan and Arthur F. May, Cleveland, Ohio. Filed Jan. 18, 1904. Serial No. 189,532. (No model.)

Claim.—1. In running gear for vehicles, the combination of an axle and a wheel, a ratchet keyed to the axle, a ratchet case loosely mounted upon said axle, pawls carried by the casing, and a coil spring connecting the casing and the wheel, substantially as set forth.

769,402. Vehicle. Edward J. Pennington, Cleveland, Ohio, assignor to William J. Morgan and Arthur F. May, Cleveland, Ohio. Filed Jan. 18, 1904. Serial No. 189,535. (No model.)

Claim.—1. In a wheeled vehicle, the combination of a body, a front axle, a support at either side of and under the body provided with sockets, a reach having trunnioned arms adapted to enter said sockets, and a frame mounted upon the front axle and pivoted to



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the forward end of the reach, substantially as set forth.

769,403. Secondary or Storage Battery. Carroll Potter, Philadelphia, Pa. Filed Dec. 21, 1903. Serial No. 186,077. (No model.)

Claim.—1. The combination of a connecting strap, plate lugs joined thereto and depending therefrom, and bridge pieces interposed between and attached to the lugs to relieve the strain at the joints of the lugs with the straps, substantially as described.

769,438. Automobile Sleigh. Francis Hartom, Canajoharie, N. Y. Filed May 3, 1904. Serial No. 206,224. (No model.)

Claim.—1. An axle having a centrally disposed ball member and propelling wheels at the ends thereof, a driven casing upon the ball member, pins extending radially from the latter into transverse slots in the casing, and connecting means between the latter and a vehicle to be propelled, said connecting means including annular boxings connected with the thills of the vehicle and exteriorly convex members connected with the casing and engaging said boxings.

769,606. Automobile Legging and Boot. Alexander Heilbronner, New York, N. Y. Filed Nov. 28, 1903. Serial No. 183,061. (No model.)

Claim.—1. A legging comprising a leg portion having an overlap extending the entire length of the leg portion, with points formed thereon and a toe portion all made of a single piece of material, a sole on the toe portion, straps having hooks on their ends secured to the points, a hook secured to the edge of the overlap intermediate the points and eyes secured to the leg portion.

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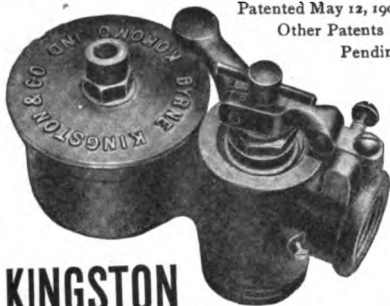
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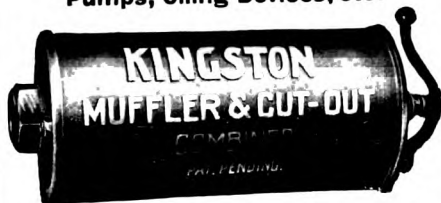
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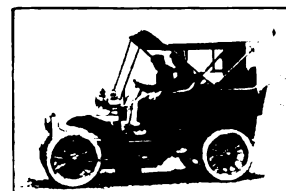
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TANKS,
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BRISQZ MFG. CO., - Detroit.



HIGH-GRADE LAMPS

Acetylene Gas and Oil

ATWOOD MFG. CO.,

Amesbury, Mass.



"Jack, what is C H & D, a new breakfast food?"

"No, it's a Railroad from Cincinnati to Chicago. Speaking of food,
I got the best meal on their cars I ever had on a railroad."

THE MITCHELL

The Car You Ought to Have at the Price You Ought to Pay.

Bristling With Original and Exclusive Features.

Are you posted regarding them?

MITCHELL MOTOR CAR CO.,

9 Packard Ave., Racine, Wis.

THE DUERR-WARD CO., No. 1787 Broadway, New York Distributors.

ARTHUR G. BENNETT, No. 20 Lake St., Chicago Distributor.



NOT AN EXPERIMENT.

Why use a tire that causes you trouble, when one can be obtained that has passed the experimental stage and has given universal satisfaction to all users.

All roads are alike when a machine is fitted with Tennant Tires.

Send for catalog that tells all about it.

TENNANT AUTO TIRE CO.,

144 West Main Street, Springfield, Ohio.
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Good Pressed Steel Frames

are made by us because "Experience" has been our teacher—a hard master but a good one.
Quotations and 1905 blue-prints on request.

THE PARISH & BINGHAM CO.,

Mfrs. of the Indestructible P. & B. Wheel,
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In Case of a Tire Burst.

In the case of a burst—which happens even with the best tires—it is better to remove the entire cover, if you can spare the time. Clean out the inside with a piece of rag damped with gasoline, and, when dry, fix in a piece of thick canvas which is large enough to go right across and lap over the beaded edge on each side. While this is drying, attend to the tube as previously directed, and after replacing the cover and tube, inflate the tube to a slight degree and apply the tire gaiter.

It is quite possible to remove a tire without the aid of a jack by rolling the wheel backward and forward. The procedure is as follows: Remove as much of the bead as you can from the side of the wheel nearest to you, and then take out as much tube as the circumstances will permit; then roll the car forward bodily, and the rest of the cover can be detached and the tube entirely taken out. After taking out the security bolts, with the tire lever you can get the inside bead over the outside lip of the rim as far as the ground, and by rolling the car backward a few feet the cover will be free.

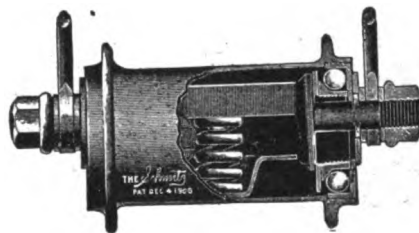
Popular Wedding Trip.

A popular wedding trip is to take a D. & C. steamer to Mackinac Island.

If you want a delightful wedding trip, where you are not likely to meet acquaintances, take one of the new D. & C. steel steamers to the island of cool breezes. State-rooms and parlors reserved 30 days in advance. Send 2c. for illustrated pamphlet.

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For BICYCLES, MOTOR CYCLES, AUTOMOBILES Holds several World's Records for speed. Relieves and breaks jar below the axle, thereby saving at least half the wear on tire. Absolutely guaranteed.

FRANK SCHMITZ, & SONS,
560-564 Orleans St. Chicago, Ill.

Better Not.

have any ignition outfit than to have a poor one.

WE MANUFACTURE NOTHING BUT THE BEST.

WRITE FOR CATALOGUE

AMERICAN COIL COMPANY

West Somerville, Mass.

AUTO SUPPLY CO.,

Broadway, corner 30th St. New York Agents



WHITLOCK COOLERS

For 1905.



Experiments are Expensive.

Sometimes they are not only expensive, but fatal. This is especially true in motor car construction. It is, therefore, always on the side of safety and good judgment to adopt those parts which have stood the test of time and have acquired for themselves a reputation based upon actual merit. Price is not always the most important consideration.

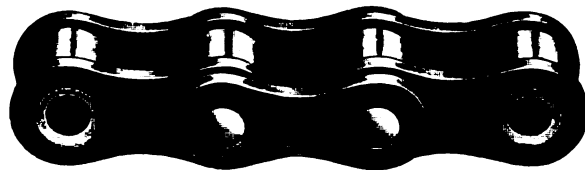
Therefore, in deciding what cooler you will use for 1905, select one with a reputation.

The Whitlock Cooler has stood the test of time. It has been used for two seasons by the majority of American builders of touring cars. Our experience in this line is now unequalled. Write us about your cooler proposition.

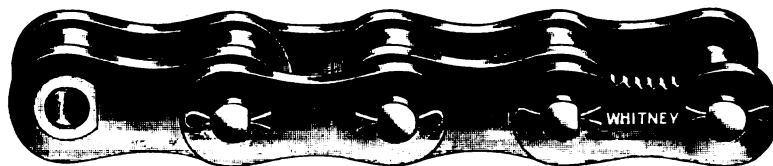
THE WHITLOCK COIL PIPE COMPANY

HARTFORD, - CONNECTICUT

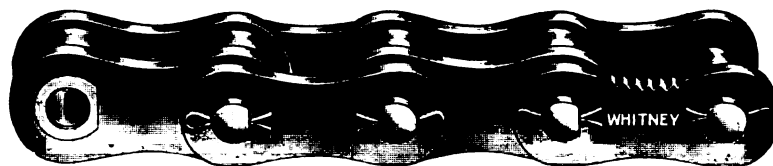
"WHITNEY" CHAINS



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Patent Allowed.



REMARKABLE REPORTS from 1904 Customers.

More IMPROVEMENTS for New Season.

THE WHITNEY MFG. CO., Hartford, Conn.

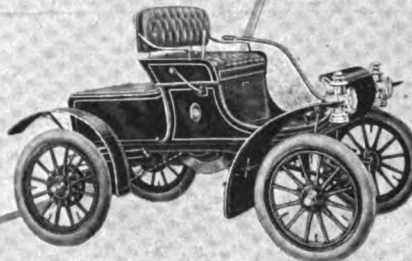
OLDSMOBILE

**All the time—
On time—Every time**

When you're ready the Oldsmobile will go. The name stands for reliability. The Oldsmobile is *built to run and does it.*

Oldsmobiles embody all the advanced ideas and successful practical principles in automobile construction.

**Oldsmobile
Standard
Runabout
Price \$650**



**Oldsmobile
Light
Tonneau
Car
(Illustrated below)
Price \$950**

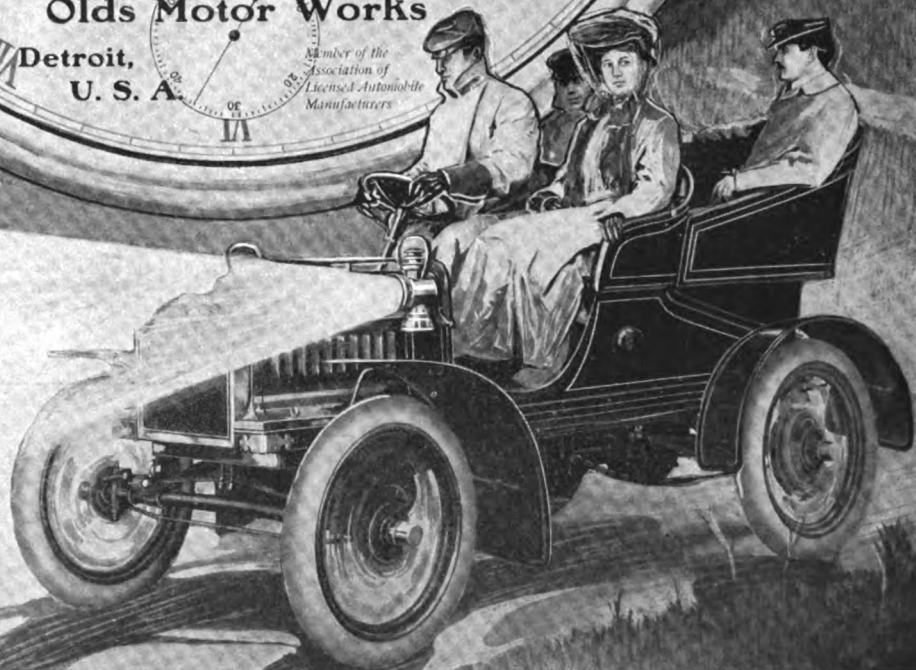
One of the first things that impresses you regarding the Oldsmobile Light Tonneau Car is the handsome and attractive exterior. The first ride arouses your enthusiasm over the comfortable and commodious tonneau and the perfect working of the springs. These cars are equipped with hub brakes controlled by foot lever, tilting steering post, safety device which relieves compression and prevents "back fire," honeycombed radiator, divided front seat, main bearings are self-oiling, cylinder and cylinder heads are cast integral, spark plug and carburetor accessible by lifting the foot board. These are only a few of the distinct and special features that characterize the Oldsmobile Light Tonneau Car.

For further particulars call on our nearest sales agent or write direct to

Olds Motor Works

**Detroit,
U. S. A.**

Member of the
Association of
Licensed Automobile
Manufacturers





THE GOODRICH TIRE RECORD

IN THE
GREAT ST. LOUIS TOUR.
THE BEST YET.

79 Goodrich Tires in the run, or nearly one-third of all.
21 more Goodrich Tires than any other make.

Over 50 per cent. of the Goodrich Tires started from
New York, Boston, Baltimore and Philadelphia.

Nearly 50 per cent. of our nearest competitors' tires
started from Chicago only.

Not a new Goodrich Tire that showed a defect or
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Two old cases which had run 12,000 and 15,000 miles
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Such a record speaks volumes and gives to the

ORIGINAL AMERICAN CLINCHER
The Cleanest Tire Score Ever Achieved
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CADILLAC, BUILT FOR BUSINESS

Sharon, Pa., July 27, '04.

I ordered the Cadillac Model B from Mr. Roth, and am very well pleased with it. I wish to thank you for the interest taken, for the car is more than satisfactory. I have taken the run in the mountainous country below Buffalo, carried four heavy people, and found her to be a regular little locomotive. I have run the car on about 600 miles of country and city roads, and have not been obliged to make a repair or adjustment.

Very truly yours, (Signed) E. F. BENSON.

Mr. Benson is a traveling man and is using his machine for business.

In the hands of a proper operator a Cadillac will do better work than any automobile made and sold at a price under \$1,500.00. It's the car you ought to buy at the price you ought to pay.

CADILLAC AUTOMOBILE COMPANY,

Member Association of Licensed Automobile Manufacturers.

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Hand Book

OF GASOLINE AUTOMOBILES ISSUED FOR
THE INFORMATION OF THE PUBLIC WHO
ARE INTERESTED IN THEIR MANU-
FACTURE, SALE AND USE.

This handsomely bound and artistically printed book contains 83 pages and illustrates 76 gasoline cars, one car and its specifications to each page. It is issued primarily for convenience and information to the prospective purchaser of an automobile. The products of the principal manufacturers throughout the United States of America and the Importers of gasoline machines are shown by illustrations and specifications. These specifications form a series of the leading questions that arise in the mind of the purchaser, with the answers thereto in red ink. The questions being uniform, the ease of comparison is obvious, and the purchaser is enabled to select the machines which are best suited to the service required, to his personal taste, or the means at his command.

Sent upon receipt of 6 cents in stamps for postage.

Association of Licensed
Automobile Manufacturers,

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Unique and Unparalleled
Performance of the Pathfinder

ELMORE



The history of automobiling in America records no more sensational performance than that of the Pathfinder Elmore on the recent trip from New York to St. Louis and return. An ordinary stock car was selected to map out the roads in advance of the endurance run. This tremendous trip of more than 5000 miles over villainous roads was made by the Pathfinder Elmore with a repair bill of only 25 cents, and not a single displacement. Did any car in the endurance run—whether it cost \$1000 or \$10000—equal this astonishing record of the \$850 Elmore? Send for catalogue and the intensely interesting little book "One Long Jump and Two Short Steps."

THE ELMORE MFG. COMPANY,

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IMPERIAL WHEELS

MOVE THE "WORLD."

See our Location.

DETROIT 3 hours.
Buffalo 12 hours.
Cleveland 10 hours
CHICAGO 24 hours.



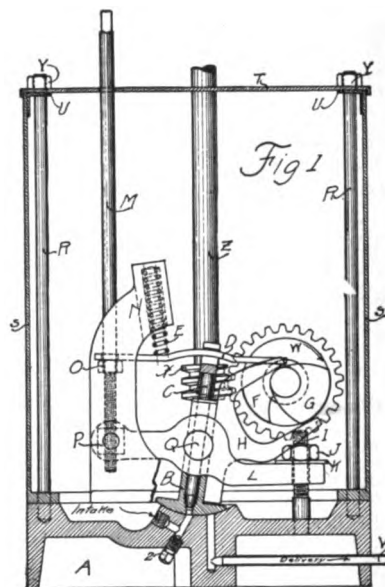
Baltimore 5 days.
New York 4 days.
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*We are supplying the largest
Manufacturers—WHY?*

THEY GET THE WHEELS.

**IMPERIAL WHEEL COMPANY,
Flint, Mich., U. S. A.**

THE HILL PRECISION OILER



Measures the oil for the bearings, and always sends it there.

**THE STEEL BALL COMPANY,
832 Austin Ave., Chicago, Illinois.**

HEALTH FOR YOU

flows out of the rocks at the
various medicinal springs at

FRENCH LICK-WEST BADEN SPRINGS

in the highlands of Southern Indiana. This
is the season of the year when a brief visit
there will restore the normal balance of your
system—renew appetite—put you in condition.

Outdoor and Indoor Recreations in plenty—Golf Playing Now
Superb Hotel Accommodations.



Hotel Rates range from \$8 to \$35 per
week, including free use of
all the waters.

Booklet telling all about the waters and giving list of Hotels and
Boarding Houses, with their rates, sent free.

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Gen. Pass. Agt., Chicago.

OHAS. H. ROCKWELL,
Traffic Man.

FIRE PROOF



Hotel Lenox

Boylston and Exeter Streets
Back Bay, BOSTON

ONE OF THE FINEST MODERN
FIRE PROOF HOTELS IN THE
COUNTRY. TWO MINUTES'
WALK FROM THE BACK BAY
STATIONS, AND ONE BLOCK
FROM COPLEY SQUARE

CHARLES A. GLEASON, *Manager*
Send for illustrated booklet

THE LOCOMOBILE GASOLENE CAR



Locomobile CASOLENE CARS

Equal in all respects to the best foreign cars, but better adapted to American roads. FRONT VERTICAL MOTORS only.

Prices, \$2100 up.

The Locomobile Co., Bridgeport, Conn.

BRANCHES: NEW YORK, Broadway and 76th St.; PHILADELPHIA, 249 North Broad St.; CHICAGO, 1354 Michigan Ave.; BRIDGEPORT, Factory at Seaside Park; BOSTON, 15 Berkeley St.

Member Association of Licensed Automobile Mfrs.

TAKE A KNOX WATERLESS GASOLINE CAR TO THE MOUNTAINS

and climb right up without let or hindrance. Knox does the trick. No overheating of engine—no water troubles—no worry—simply luxury in mountain touring.

BEST BY ROAD TEST.

Get Catalogue.

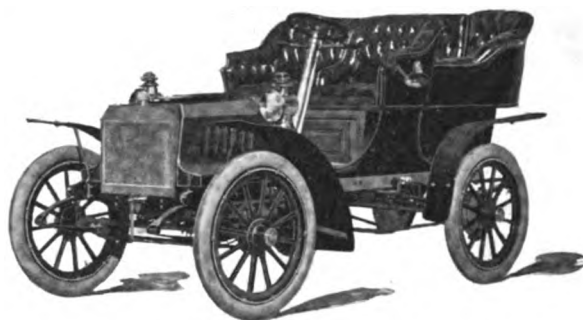
6 Styles Passenger.

6 Styles Commercial Cars.

Knox Automobile Co.,
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Members Ass'n Licensed
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*Selling Agencies in
all Principal Cities.*



THE AUTOCAR

The Only Automobile
Built and Sold on a
Commercial Basis : :

Four Passenger, \$1700. Runabout, \$900

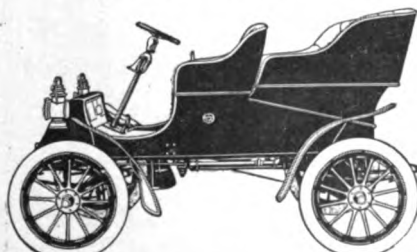
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THE AUTOCAR COMPANY, Ardmore, Pa.

Member A. L. A. M.

A good name is better than Promises.

THE FORD



has a reputation for reliability, second to no motor car in the world. For the professional or the business man who needs a machine for every day use, THE FORD stands prominent as "The Car of Satisfaction." Verified facts are better than "claims."

10 H. P. Double opposed horizontal motor, cylinder head and water jacket cast in one piece (no packed joints.)

Planetary transmission in oiltight dust proof case.

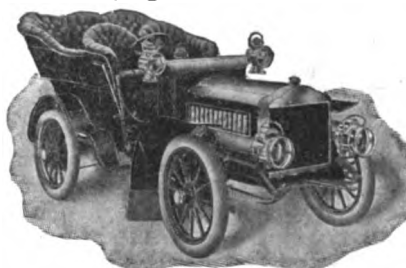
The perfected construction of the Ford is the result of 15 years actual

experience in building gasoline automobiles. Don't EXPERIMENT—JUST BUY A FORD. Full particulars and catalogue for the asking.

FORD MOTOR CO., Detroit, Mich.

ENTIRE OUTPUT 1904 THOMAS FLYERS SOLD.

NO CAR HAS BETTER REPUTATION.




The 1905 "FLYER" will shortly be announced.

GET IN LINE IF INTERESTED.

RIDE IN A "THOMAS" OR TAKE "THOMAS" DUST.

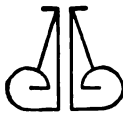
E. R. THOMAS MOTOR CO., No. 1210 Niagara St., Buffalo, N. Y.



RIM LIFE

means

TIRE LIFE.



“SWEDOH” Spring Steel Rims

are long-lived.

Their use insures long-life to the tires to which they are fitted.

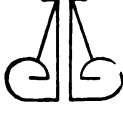
The composition of “SWEDOH” SPRING STEEL is peculiarly adapted to automobile rim building. There's just the right proportion of toughness to keep the rims round and just enough spring to soften the shocks to which a rim is subjected.

“SWEDOH” SPRING STEEL RIMS are now used by most builders of high-class cars, and are heartily indorsed by all tire manufacturers.

Made by
THE AMERICAN TUBE & STAMPING CO.,
Bridgeport, Conn.



We own and operate our steel billet-making and hot and cold rolling mills and stamping works.



**Now is
the Time**

to submit your

SPECIFICATIONS

for

FORGINGS

to insure

prompt deliveries.

We are ready.

Don't delay.

THE BILLINGS & SPENCER COMPANY, Hartford, Conn.

Makers of

Drop Forgings of every Description.





MY DAD SAYS
I CAN HAVE
AN AUTO
WITH
MORGAN
&
WRIGHT
TIRES ON
WHEN I
GET
BIGGER

Reproduction of above picture in nine colors sent to auto owners on request.

**MORGAN & WRIGHT,
CHICAGO.**

New York
St. Louis

Dayton
San Francisco

Detroit

THE NEW G & J THREAD FABRIC TIRE.

**THE FASTEST TIRE IN THE WORLD.
A REVELATION IN TIRE CONSTRUCTION.**

The **FORD RACER**, at Providence, makes new world's records for machines of 551 to 881 lbs. weight.

2 Miles,	-	2 Min., 4 Sec.	4 Miles,	-	4 Min., 7 4-5 Sec.
3 " "	-	3 " 6 2-5 Sec.	5 " "	-	5 " 8 3-5 "



G & J TIRE CO.,

Main Office and Factory,

INDIANAPOLIS, IND.

Darracq Motor Cars

SET THE FASHION TO THE WORLD.

Speed, Silence, Comfort.

(MICHELIN TIRES USED.)

AMERICAN DARRACQ AUTOMOBILE COMPANY,

Controlled by F. A. LA ROCHE COMPANY,

652 Hudson St. and 147 W. 38th St., New York.

PHILADELPHIA, 317-319 North Broad St.

The Best Automobile Motors

AND

Automobile Charging Machines

ARE MADE BY

THE ELWELL-PARKER ELECTRIC CO.,

CLEVELAND, O.

Aluminum Bodies

of the
HIGHEST GRADE.

TOPS, FENDERS and HOODS.

Painting, Repairing
and Remodeling.

**Chassis Lengthened and Side Door
Entrances a Specialty.**

MOORE & MUNGER CO., 602 West 52nd St., New York City.

TELEPHONE, 4425 Columbus.

ACME DUST SHIELD.



Does not interfere with entrance to tonneau. Made to fit any car. Easily removed. Rolls up into brass shield and out of the way when not in use. Price, complete, \$12.00.

THE ACME MUFFLER

for any horse power. Absolutely the most perfect muffler on the market. Correspondence solicited.

ACME MOTOR CAR & REPAIR COMPANY, Cleveland, Ohio.

We Do Not Build Racing Machines BUT

At Del Monte, California, on August 26th and 27th. a regular stock

Rambler

Won the 5-mile race for light touring cars in 8:16 $\frac{1}{4}$.

Won the Australian pursuit race for cars costing \$2500 or less in 8 $\frac{3}{4}$ miles; time, 17:49.

Won the hill-climbing contest for cars costing between \$1000 and \$2500, on a course 1 $\frac{5}{8}$ miles long, with grades from 2 to 18 per cent., in 3:04.

Won the 5-mile race for cars costing \$2500 or less, in 6:15 $\frac{3}{4}$.

Won the 5-mile race for cars rated at 16 horse power or less, in 6:01.

Rambler

machines entered in eight races and received

Five First and Two Second Prizes.

SUMMARY:

Five miles, for light touring cars:
H. COUSINS, RAMBLER,
Cuyler Lee, Cadillac,

Time, 8:16 $\frac{1}{4}$.

FIRST
Second

Australian Pursuit Race, for cars costing \$2,500 or less:
W. E. SAUNDERS, RAMBLER,
W. Grothe, White,
W. K. Cowan, RAMBLER,

Distance, 8 $\frac{3}{4}$ miles.
Time, 17:49.

FIRST
Second
Third

Hill climbing contest for cars costing from \$1,000 to \$2,500:
W. E. SAUNDERS, RAMBLER,
W. K. Cowan, RAMBLER,
W. Grothe, White,

Distance, 1 $\frac{5}{8}$ miles.
Grade, 2 to 18 per cent.
Time, 3:04.

FIRST
Second
Third

Five miles, for cars costing \$2,500 or less:
W. E. SAUNDERS, RAMBLER,
W. Grothe, White,
W. K. Cowan, RAMBLER,
E. E. Russel, Thomas,

Time, 6:15 $\frac{3}{4}$.

FIRST
Second
Third
Fourth

Five-mile race for cars not over 16 horsepower:
W. E. SAUNDERS, RAMBLER,
W. K. Cowan, RAMBLER,

Time, 6:01.

FIRST
Second

Hill climbing contest for cars costing from \$2,000 to \$4,000:
Bert Dingley, Pope-Toledo,
W. E. SAUNDERS, RAMBLER,
H. M. Chambers, Great Arrow,
W. K. Cowan, RAMBLER,

Distance, 1 $\frac{5}{8}$ miles.
Grade, 2 to 18 per cent.

Time.
FIRST 2:43
Second 2:47 $\frac{1}{2}$
Third 3:25 $\frac{1}{2}$
Fourth 3:35

Why not write for our illustrated motor book; it explains why the

Rambler

excels the high-price cars; it is an American machine, not a copy, and can hold its own in any company.

"Our Little History" is entertaining; it is also free for the asking.

THOMAS B. JEFFERY & COMPANY,

BRANCH HOUSES: { BOSTON, 145 Columbus Avenue.
CHICAGO, 302-304 Wabash Avenue.
PHILADELPHIA, 242 North Broad Street.

Kenosha, Wisconsin.

THE MOTOR WORLD.

A WEEKLY JOURNAL DEVOTED TO THE AUTOMOBILE
AND KINDRED INTERESTS

Volume VIII.

New York, U. S. A., Thursday, September 22, 1904.

No. 26

DAIMLER GOES TO LAW

Seeks to Enjoin Four Mercedes Owners and to Have Their Cars "Destroyed Forthwith."

If suits filed on Monday in the United States Circuit Court for the Southern District of New York are successful, a number of prominent New Yorkers will be deprived for all time of the use of their Mercedes cars and be required to deliver them up for conversion into junk.

The actions are brought by the Daimler Mfg. Co., of America, and C. L. Charley, of Paris, the latter being the licensee of the former in this country, against James L. Breese, Paul J. Rainey, George Baker and Mrs. Albert W. Scholle, all of whom are claimed to have recently imported Mercedes cars through unauthorized sources. The court is asked, therefore, to grant an injunction restraining the defendants from using these cars, and to require them to deliver their cars to the court in order that they may be "forthwith destroyed."

The plaintiffs in the suits are, as stated, the American Daimler Co. and C. L. Charley. The former concern owns the patent rights to the Mercedes cars, and the latter is licensed by it to sell Mercedes cars in this country. Furthermore, Charley has an arrangement with the Cannstadt Daimler Co. whereby he controls the sale of its cars in France and America. Although thus doubly authorized, Charley is the defendant in a suit brought more than six months ago by the Association of Licensed Automobile Manufacturers, alleging infringement of the Selden basic patent. Thus, while he is anxious to keep others from bringing the cars into this country without paying tribute, his own right to do that sort of thing is challenged.

The suits brought against Breese, et al., mark the beginning of a radical change of policy on the part of the American Daimler Co. That concern is the absolute owner of the Daimler patents in America, but heretofore it has confined itself chiefly to the manufacture of cars at its plant at Long Island

City. Mercedes cars have been imported on a considerable scale, in spite of the company's rights and without the payment of royalty or other acknowledgment; and no action has been taken to restrain or prevent the practice. But it has now been decided by the company to entirely reverse this policy and to seek to enforce its rights in the courts. As Attorney Howard Taylor, of Taylor, Anderson & Seymour, who represent both the Daimler Co. and Charley, put it to a Motor World representative on Wednesday:

"The company has determined to see whether it has been selling a gold brick in licensing people to sell Mercedes cars in America—whether it has been getting something for nothing in accepting money for the granting of such a license. The officers of the American Daimler Co. do not think so. They believe that their ownership of the Daimler patents is a tangible and valuable asset, and that the courts will decide them to be valid and enforceable against all comers.

"If we succeed in doing this—well, there will be a day of reckoning for those who persist in importing Mercedes cars without the formality of recognizing our rights in the matter."

Continuing, Mr. Taylor said that he expected that the court would reach a decision by next spring. Testimony will be taken in the meantime, and submitted to the court for its action. The defendants have until the first Monday in November to file their answer.

Asked whether the parent Daimler company could not prevent such sales by tracing the cars and closing the sources of supply, Mr. Taylor said:

"If it were so disposed I think it could do so. And one would suppose that it would show a disposition to do this; but it has not done so, and the onus of taking measures of putting a stop to the practice is forced upon us."

In this connection, it is not wholly a state secret that the number of automobiles purchased abroad and brought into this country by individuals exceeds by nearly three to one the entire number imported by authorized agents.

GIBBS IS DEEPLY INVOLVED

Receiver Finds Affairs in Bad Shape—Liabilities Exceed Assets by \$73,000.

The failure of the Gibbs Engineering and Mfg. Co., Glendale, L. I., on August 31, which was exclusively reported by the Motor World, proves to have been of greater magnitude than originally supposed. The liabilities exceed the realizable assets by \$73,000.

The affairs of the concern are now in the hands of MacDouglas Hawkes, as receiver, who has appointed a committee of the largest creditors to consider the advisability of raising sufficient funds to complete the orders on hand. This committee consists of Chairman Randolph H. Ludlow, who is counsel for Joseph F. Clark; A. H. Whiting, Edison Storage Battery Co.; E. W. Mussey, Electric Vehicle Co.; M. Kittle, Pell & Co., and O. C. Tough, Shadbolt Mfg Co.

The realizable assets amount to \$98,767.08, and the liabilities, in round figures, to \$130,000; of the latter, \$14,033.38 are preferred labor claims; the claims of the unsecured creditors aggregate \$110,554.64. The total capital stock is \$302,000, of which \$52,000 had been put in.

Of the assets, \$40.02 is represented by cash on hand and in bank; \$34,960 by materials and machines in process of manufacture, \$26,000 by fixtures and tools, \$22,555 by accounts receivable, \$18,000 by accounts in dispute, which are estimated to be actually worth \$548.45; there are also accounts receivable and pledged to the amount of \$25,155, and pledged accounts in dispute totaling \$14,700.

The biggest item, which is not reckoned a realizable asset, is "patents and contracts," \$252,227.65.

The Men Who Will Award the Medals.

The automobile jury of awards, which is now performing its duties at the St. Louis Exposition, consists of W. J. Howard, of New York; Henry Souther, of Hartford; H. V. Wille, of Philadelphia, and E. J. Stoddard, of Detroit. Of the number, Mr. Souther is the only one prominently identified with the automobile industry.

JEFFERY VS. WINTON

Big Makers at Odds in Patent Office Over Rights to a Starting Device.

It came to light last week, through the United States Patent Office Gazette, that conflicting claims to the priority of invention of a starting device for explosive motors, devised by Alexander Winton and Thomas B. Jeffery exist and are in litigation, having been brought before Acting Commissioner of Patents Moore. The matter was brought up in the shape of an appeal by Jeffery from a decision of the examiner of interferences refusing to grant his motion to transmit the interference to the primary examiner to hear and determine a motion to dissolve the same. In denying the appeal and affirming the decision of the examiner of interferences the acting commissioner did not touch on the question of priority. He pointed out that the determination of the questions of fact and law presented by the motion to dissolve is not within the province of the primary examiner.

"It appears that Jeffery's motion is brought long after the twenty days allowed by the rules for the purpose of bringing such motions," says Acting Commissioner Moore, in reviewing the case.

"The records show that Winton, the junior party, has taken his testimony, and Jeffery contends that Winton has failed to establish a conception of the invention defined in certain counts prior to August, 1900, and he calls attention to the fact that he (Jeffery) has been granted a patent, No. 680,923, dated August 30, 1901, on an application filed March 8, 1900, which, it is contended, discloses the invention of the issue. It is therefore argued by Jeffery that if Winton has not established a conception of the invention prior to August, 1900, it follows as a matter of course that he is not entitled to the claims, as his (Jeffery's) application, on which his patent was granted, was filed on March 8, 1900, some five months prior to Winton's alleged proved date of conception. It is seen, therefore, that the reason for bringing this motion arises out of the testimony which has been taken. As a general rule, motions to dissolve an interference are not transmitted when the reasons for bringing the same arise out of the testimony. (Felbel v. Oliver, 92 O. G., 2339). There is another reason why this motion to dissolve should not be transmitted, and that is that the question presented for decision is that of priority of invention as distinguished from the mere question of anticipation.

"In order to determine aright the question brought by Jeffery, the testimony of Winton must be considered and an opinion must be rendered in the light of the testimony as to the date of Winton's established conception of the issue. Not only must this be done, but it must be decided also whether or not the patent referred to contains a disclosure

of the issue. Upon the determination of these facts depends the judgment of priority of invention as between the parties to the interference, and the determination of this question is wholly within the jurisdiction of the examiner of interferences in the present interference. The determination of the questions of fact and law presented by this motion to dissolve is not within the province of the primary examiner.

"As stated by the examiner of interferences:

"It is urged in behalf of Jeffery that if the interference is dissolved as to the second and third counts, the evidence to be introduced in his behalf would be very greatly reduced. The reply to this is that Jeffery need not take any testimony on these counts if he is convinced that Winton was not established priority."

"Jeffery need only call attention in the record to his Patent No. 680,923, dated August 30, 1901, before closing his testimony. (Rule 154(6)). To do this will not greatly encumber the record, neither will it place upon Jeffery such a burden of expense as he seems to fear.

"The decision of the examiner of interferences is affirmed."

Failed to Meet the Mortgage.

Suit to foreclose a chattel mortgage upon a \$2,500 Winton touring car, belonging to J. Walter Hambrick, a Southern stove manufacturer, was filed in the Common Pleas Court, Cincinnati, Ohio, last week by the Hanauer Automobile Co., of that city.

According to the plaintiffs, Hambrick has bought several motor cars since he has been in Cincinnati. The last one he purchased was the Winton touring car, which he bought last spring. Upon this there was a balance of \$1,003.67 due the automobile company, and Hambrick gave a chattel mortgage upon the machine to cover this. Recently Attorney C. L. Hopping presented a second mortgage on the car for \$1,750, and assigned his claim to the automobile company. As neither claim has been liquidated the Hanauer company decided to foreclose. The machine is now in the possession of the automobile company.

"Willie K" Orders a White.

Three of the 1905 model White cars are now at the Quinby shops, at Newark, N. J., being fitted with special bodies. One of the White salesroom and garage, 42 West Sixty-second street, this city, the advance shipment of regular 1905 models is expected this week.

Among New Yorkers who have placed orders for the new Whites are W. K. Vanderbilt, jr., and E. H. Harriman. One of the Quinby cars referred to above is for "Willie K.," and when ready it will be given a place in his stable along with his racing cars. It will not be used for speed work, however, as it is a regular stock model, with the exception of the body.

SWEDEN HEARD FROM

And as a Result Conrad Assets Shrink Again—
Mexico Also in Line.

Further shrinkages in the assets of the Conrad Motor Co., Buffalo, N. Y., are threatened as a result of two suits brought against it by foreign buyers whose claims appear likely to be sustained.

The first claim is that of F. Hiorth, of Christiania, Sweden, who contends that the company should pay him \$1,300. Some time before the concern went into bankruptcy, it is claimed, Hiorth ordered a Conrad steam carriage and paid \$810 for it. Hiorth had the machine shipped to Sweden and was to sell it to one of his countrymen. The machine, according to Hiorth, was not as ordered, and his customer refused to take it.

Now Hiorth asks for the return of the \$810, and demands the amount of the profits, \$343, which he would have gained, and the cost of transporting the machine, \$150. Attorney for the trustee objected to the allowing of the claim at \$1,300, and claimed that the Bankruptcy Court has no jurisdiction in the matter, which would have to be settled in State court. Rather than go to the trouble and expense of such an action, Attorney Stanley said his client, Hiorth, would settle the matter for \$300. Referee Hotchkiss agreed to confirm this settlement, and it will be probably made at the final meeting, to be held soon.

Attorney Stanley also presented a claim of \$300 held against the concern by Petro Diaz, a relative of the President of Mexico. Diaz sent \$1,000 here for a machine, which he claims was never delivered. He was returned \$700 and now files a claim for the balance, \$300.

Ypsilanti Hears the Tempter.

An unnamed Detroit automobile manufacturing company is reported to be contemplating removal to Ypsilanti. The concern is said to have been recently organized and to possess some "valuable patents as well as orders." It has not, however, begun to manufacture.

A prerequisite of removal to Ypsilanti is the subscription of \$25,000 worth of stock by the citizens of that place. The present capital is said to be \$400,000.

How Side Door Talk Hurt Sales.

"While it is not generally realized," remarked a New-York dealer the other day "the talk and announcements of forthcoming side entrances has had an appreciable effect on the dealer's trade of the late summer and early fall. Nearly all prospective buyers are fairly well posted, and it is not now easy to sell them cars with rear entrances, which next year will appear out of date. I have lost several sales for no other reason."

LITTLE THINGS THAT COUNT

Motorist Takes Makers to Task and Points Out What he Considers Improvements.

"Perhaps we motorists are a complaining lot, who make mountains out of molehills, and sometimes blame makers for what is not their fault. And it is true that they have their hands full and do the best they can, so I suppose we ought not to be too hard on them. But I have two kicks to register, and as it will relieve my mind, if it accomplishes nothing else, here goes."

The speaker was a motorist of considerable experience, and one who was not in the habit of finding fault without occasion. Consequently the Motor World man listened attentively.

"First, there is my steering wheel rod. Why isn't it made adjustable? Are all users of cars the same size and build that one height of rod will suit them all? I guess not; but all the same, no one ever thinks of providing for a variation in the height or rake to suit different motorists."

"On some cars there is a provision for throwing the wheel forward so that a stout person, or any person, for the matter of that, can get into the seat without squeezing his stomach all out of shape. But if he is tall or short, and the rod is too short or long, he has to grin and bear it. If it is so much out of the way that you suffer great inconvenience, you can apply a remedy. This is, if the rod is too long and the wheel comes up to your chin, you can take the rod out and cut a section of it off with a hack saw! Or if it is too short you can buy a new rod, one that is long enough! Why, even the parts people carry only one length of rod. I went to one of them not long ago to see if I could not buy an adjustable rod, and was told that they came only in one length, and that it was made long purposely so it could be cut off to the desired length! Imagine buying pantaloons all of one length and turning them up at the bottom so they would not touch."

"Next, why don't makers fit longer crank handles? In a car with a fairly big motor you have got to bring plenty of power to bear to turn your engine over, and that means that you should have plenty of leverage on your crank. Now, it is just as easy to have it ten or twelve or even fourteen inches as six or eight. Then you could yank it around without any trouble. My car had one of the 'dinky' handles, and I bore with it for many months. But I finally made up my mind that I would not stand it any longer, so I had one made. It is twelve inches long, and with it I can turn over my engine with scarcely an effort. It is such an improvement that I can't help wondering why motorists put up with the apologies for cranks that are fitted to their cars."

The Week's Incorporations.

St. Louis, Mo.—South Side Automobile Co., under Missouri laws, with \$5,000 capital. Incorporators: C. H. Michaels, W. R. Orthwein, Newman Samuels, L. A. Hoerr and John Hoerr, jr.

Niagara Falls, N. Y.—The Cataract Machine & Automobile Co., under New York laws, with \$5,000 capital. Directors—F. V. Simpson, Max Amburg and S. P. Franchot, all of Niagara Falls.

Watertown, Mass.—Stanley Motor Carriage Co., under Massachusetts laws, with \$95,000 capital. President, Freelan O. Stanley, Newton; vice-president and treasurer, Francis E. Stanley, Newton; clerk, Richard P. Elliot, Boston.

Baltimore, Md.—The Maryland Automobile Co., under Maryland laws, with \$10,000 capital; to deal in all kinds of motor vehicles. Corporators—J. Henry Miller, Ira L. Fetterhoff, Henry R. Bormann, Myron W. Higgins and John J. Mason.

Toledo, O.—The Toledo Fire, Police Notification and Parcel Delivery Co., under Ohio laws, with \$25,000 capital, to establish an automobile package delivery service. Officers: Douglass Long, president; Maurice Weiss, secretary, and C. W. Tanner, treasurer.

Pittsburg, Pa.—Auto Repair Co., Ltd., under Delaware laws, with \$5,000 capital; to manufacture and deal in automobiles and other like vehicles and to repair the same. Corporators—Rex Remerton, Pittsburg; Jefferson D. Thompson, Crafton, Pa.; Truman W. Campbell, Wilmington, Del.

Visitor Drops Hints of 1905 Mercedes.

From an Englishman named Prichard, now in this country, comes a wonderful story of the miraculous silence of the 1905 Mercedes car. He claims to have visited the factory and seen the new models. It is incomprehensible, he says, to ride in it and believe that you are really in a gasoline machine. The noise of the 1904 car has been totally eliminated, and it rides easier than an electric or a steam carriage. The motor is a most wonderful piece of mechanism, and the designer of the new one has had a model such as is used in the car running continuously for the last nine months. It has been guarded night and day, and Prichard thinks, as far as he could see, the chances are the engine will continue to run for years.

Five Shows are Sanctioned.

Sanction has been granted by the National Association of Automobile Manufacturers for the following shows: New York, January 14 to 21; Chicago, February 4 to 11; Detroit, February 13 to 18; Boston, March 13 to 18, and Washington, March 27 to April 5.

Slot Makers Show Symptoms.

The Caille Bros. Co., makers of slot machines, are the most recent Detroit people to threaten to embark in automobile manufacture; they have already built one two-cylinder two-cycle car, and are putting it to the test.

INCREASED INVOICE VALUES

Appraisers Get Busy and Hoist the Duties on a Number of Imported Cars.

Several advances in the invoice values of imported automobiles were announced this week by the Board of United States General Appraisers. One was a 40 horsepower Mercedes car entered at \$6,000 and advanced to 32,135 francs. It was shipped by Bion & Constantin, of Nice.

The following advances were made on machines from the Napier Motor Co. of London: One Cape cart head, 15 horsepower, entered at \$3,500 and advanced to \$3,800; one canopy top, 15 horsepower, from \$3,700 to \$3,925; one 24 horsepower machine, from \$4,500 to \$5,075; and one Pullman body, 24 horsepower machine, from \$4,925 to \$5,675; \$150 was also added for packing charges. One second hand 40 horsepower Napier motor carriage, shipped by S. F. Edge, of London, was advanced from \$3,250 to \$4,000.

Williams Becomes Harrison-Williams.

The Williams Rubber Co., Los Angeles, Cal., has been succeeded by the Harrison-Williams Rubber Co., with a paid up capital of \$25,000. The new officers are: President, H. A. Harrison; vice-president, T. J. Williams; secretary-treasurer, W. G. Williams.

This is claimed to be the largest establishment of its kind in this country, the business being restricted almost wholly to tires. The company handles the Goodrich, Diamond, Dunlop, Fisk and G. & J. tires in Southern California and Arizona, and carries a stock valued at about \$40,000 at all times.

Leinbachs Will Produce Light Canopy.

Berg & Leinbach, of Detroit, Mich., have been succeeded by Leinbach Bros., who have removed the business to a big four story building at 253-255 Woodward avenue, where the manufacture of tops and trimmings will be continued on a large scale. For the 1905 trade, the Messrs. Leinbachs have almost ready a new canopy with glass front, which will weigh but 40 pounds complete and ready to be attached to the car.

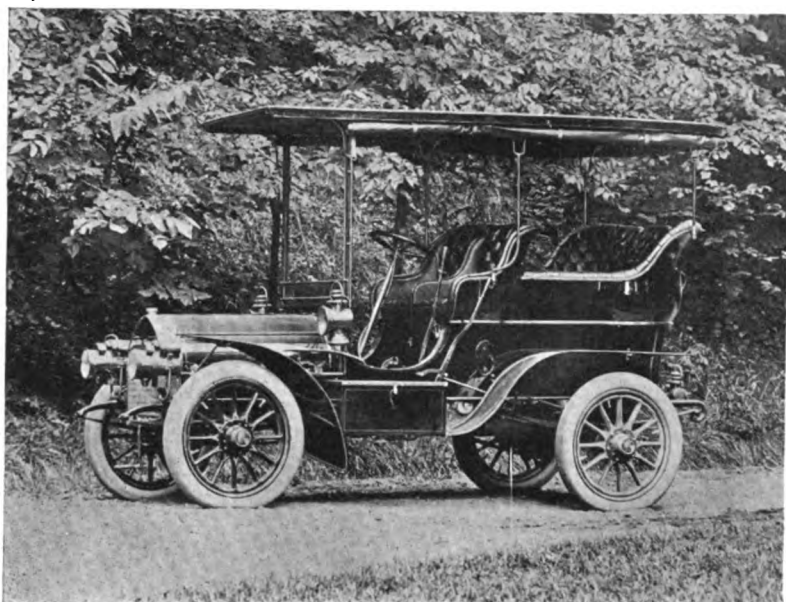
Fuller Gets the Cadillac.

The matter of the Cadillac agency for the Boston district, about which much speculation has existed, was finally settled yesterday. Alvin T. Fuller, the well known Columbus avenue dealer, is the lucky man. The order which he placed to secure the plum is said to have an unusually fat one.

California Jobbers Coming East.

J. T. Bill and J. W. Leavitt, of Leavitt & Bill, San Francisco, Oakland, San Jose and Los Angeles, will leave for the East early next month to arrange their next season's lines. They will be in Chicago on October 9 and 10 and in New York on the 19th and 20th.

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CABLE ADDRESS, "MOTORWORLD," NEW YORK

Entered as second-class matter at the New York, N. Y., Post Office, November, 1900.

NEW YORK, SEPTEMBER 22, 1904.

New York to Chicago by Daylight; the Dawn of a New Era in Transportation.

The prospect of being able to eat breakfast in New York and dinner in Chicago is not nearly so vague or so visionary as it was a month since.

While he was abruptly waved aside by a number of railway companies, and it is not to be denied that his departure from the common roads rather detracts from the merit of his globe girdling performance, Mr. C. J. Glidden's two-thousand-mile automobile journey on the rails from Minneapolis to Vancouver has proved of a nature that makes for the revolutionizing of at least certain forms of railway travel. It throws into sharp relief another of the manifold and rapidly multiplying and unanticipated uses of the gasoline motor.

Save for the steel flanged wheels that were substituted for wooden wheels and pneumatic tires, Mr. Glidden's 24-h. p. automobile

did not differ from those in common usage on the common roads, yet it appears to have served perfectly on the rails; the only trouble to which it was subject was the occasional "hot box"—that frequent affliction of all railway cars. The automobile ran perfectly smooth, the steel rimmed wheels "taking" the curves, switches and frogs safely and without jar or "rocking motion." Mr. Glidden found no difficulty in driving at speeds of from fifty to sixty miles an hour, and "at one time exceeded the running time of the Imperial Express by ten miles an hour." The difference in traction between steel rails and a macadam road surface was found equal to fifteen miles an hour in favor of the former—that is, Mr. Glidden gives it as his opinion that it is as easy to cover fifty miles on the rails as thirty-five miles on macadam—a statement easy of belief. The item of fuel consumption was similarly affected. On rails one gallon of gasoline is equivalent to twenty miles, while the same quantity will suffice for but fifteen miles on the road.

"I am satisfied," says Mr. Glidden in summing up, "that an automobile can be run from Boston to Chicago at a speed varying from seventy-five to one hundred miles an hour without stopping, making the distance in twelve hours. Mechanical experts who accompanied me on the run agree in this statement."

At first blush, and despite the agreement of engineers, this statement staggers belief, but when it is recalled that in the last race for the Bennett Cup the victor averaged on unrailed earth a speed of a mile a minute for 5 hours and 50 minutes, and frequently attained bursts at the rate of seventy-five and eighty miles an hour, the Glidden estimate proves ready of acceptance.

The prospect of being able to eat breakfast in New York and dinner in Chicago is thus not nearly so vague or so visionary as it was a month since.

What the far future may hold is known to none. It may hold a gas driven locomotive capable of drawing a train of cars at speeds that will render possible the daylight journey between the two great cities. This much, however, the Glidden enterprise has forecasted with reasonable clarity—a revolution of the special train, or rather emergency train service.

It does not require the weight of a seventh son to assert that this result is inevitable; it is merely a simple sum in commercial economics.

To-day when your railroad president or di-

rector or Mr. Pierpont Gotrox or Surgeon Hurrup would make a distant visit in which time is the chief object, and orders out or engages a special train, a huge locomotive is coupled to a huge coach and the services of at least four men—an engineer, a fireman, a conductor and a brakeman—are required to perform the duties entailed.

To-morrow, as Mr. Glidden's performance makes plain, it will be necessary to order out only the steel wheeled, self-propelled automobile coach that must become a part of the equipment of every well regulated railway company, and one man—the driver—or possibly a guard or signalman also.

The economy of the latter system is so apparent as scarcely to require remark. It is economy in first cost and in all subsequent cost—time, fuel, wages, wear and tear on both rolling stock and roadbed and in practically every other item of expense that it is possible to conceive. On the face of things, it would seem that the expense is reduced at least one-half, and, it is to be added, fewer men are risking their lives. As the so-called Pullman type of automobile is luxurious, and, to meet the new occasion, could be enlarged and made even more luxurious, the bodily comfort of its occupant is in no wise diminished, while the absence of jerks, bumps, stops, smoke, cinders, noise and other discomforts of railway travel is all in favor of the railway automobile and must prove grateful alike to the passenger and the communities through which he may pass.

If we look beyond the special service on trunk lines, it is easy to see how and why and wherein on the shorter branch lines the railway automobile coach or train should speedily oust the big steam driven locomotive, for passenger traffic at least. On many of these branch roads the travel is scarcely sufficient to justify the expense involved; it certainly is not sufficient nor does it promise ever to become sufficient to justify added or improved train service as represented by the locomotive. For residents along such lines the railway automobile alone holds hope. With its coming they will be able to obtain not only cleaner and faster service, but more frequent service; where now but two trains a day are the rule, it should be possible to double the number.

It is in the nature of a coincidence, as it is also a sign of the times, that this very week announcement is made that two such lines—the Dunkirk, Alleghany Valley & Pittsburg and the Janestown, Chautauqua & Lake Erie railroads—are seriously contemplating the

adoption of gasoline motor equipment. The reasons are not far to seek. They are the same that will make for the construction of "automobile railways" in localities in which no other form of railed transportation would prove feasible or profitable. The light rails and ballasting and comparatively modest equipment and maintenance required will enable the automobile line to earn dividends and "open up" new country where even a trolley line must fail and where the inhabitants must otherwise forever remain in the "far backwoods."

It will add to their comfort and enlightenment, and possibly assist in solving that time worn and tattered problem, "How to keep the boy on the farm."

On some of the larger and more important railways the automobile has already placed an entering wedge in the form of gas driven "inspection cars," which are really little more than handcars brought up to date. The wedge is a small one, and there is no evidence that the opening is being enlarged or that the railway officials ever have turned a really serious thought to the possibilities of the automobile on rails. The rebuffs, which Mr. Glidden encountered when he sought to obtain permission to use the rails of several of the big American railway companies is, in fact, evidence that the very contrary is the case. But his performance should serve to open the eyes of even the most encrusted among them.

That mode of transportation which contains every promise of enabling a man or men on occasion, or repeatedly, to reduce the time of travel from New York to Chicago by eight or ten hours, or even four or five, or to cut one whole day or a half day off the journey across the continent cannot be scoffed or sneezed at by any railroad official worthy of his title and salary.

And as surely as the railroad president or Mr. Gotrox in his "automobile special" makes the journey, or a load of doctors is hurried to the scene of a wreck fifty, one hundred or two hundred miles away in about the time it requires to fire a locomotive, just so surely will there be found a way to place it within the means of the common people.

The American official who in response to his inquiry curtly informed Mr. Glidden that he "would not have him on his tracks at any price" may not live to see that day. Similarly the Canadians who entered heartily and studiously into the Glidden undertaking, and who agree that it marks "the beginning of a new era in transportation," may not survive

to see the fruits of their interest, but men's natures must change did the daylight trip from New York to Chicago appear possible and remain unattempted and unsuccessful.

It is "up to" some railroad official to send his name and the name of his railroad down to everlasting glory by being the first to embrace the opportunity and the first to turn the thoughts of man toward the newer, cleaner, safer and swifter form of railway travel.

As a "Season" Business.

In spite of all that has been said and done, the automobile business is still, to a very great extent, a "season" business. At the present time almost no sales are being made, and for the next six months those made will be almost without exception for 1905 delivery. In the meantime the hundreds of efficient and reliable cars of this year's make will receive less and less attention, public interest being centred on the new models as they from time to time appear.

The responsibility for this very unsatisfactory and regrettable condition of affairs is not difficult to fix. The trade, sometimes unconsciously, sometimes with intent, begin almost as soon as the summer draws to a close, to talk new models. Naturally, this talk is rosy colored, and the changes and improvements in the cars are depicted in flowing and flowery language; the impression is given that they will far surpass the present ones, and thus is a direct incitement to give the latter the go by.

It may be said that dealers are careful to whom they talk in this matter. Perhaps they are. They may exhaust all efforts to effect the sale of a 1904 car before even mentioning the one that 1905 will bring forth. But the fact remains that their thoughts are fixed upon the latter, and this affects their talk and actions. Even as early as last month we had one dealer remark to us that "sales of this year's cars were done; all we can do now is to work up trade in the 1905's." And this remark reflects the belief of a very large number of dealers, notwithstanding some of them are still confining their efforts to the disposal of 1904 models.

On their part, makers, unless they happen to have an overstock of present season cars, and sometimes even then, are engrossed with the 1905 product. In their case this could scarcely be avoided. The new cars are designed and the process of construction is in

many cases well under way. With them it is 1905, to all intents and purposes, and 1904 has almost passed out of sight. So they are full of their work and plans, and communicate to their agents information concerning the new models, which the latter in turn transmit to their customers.

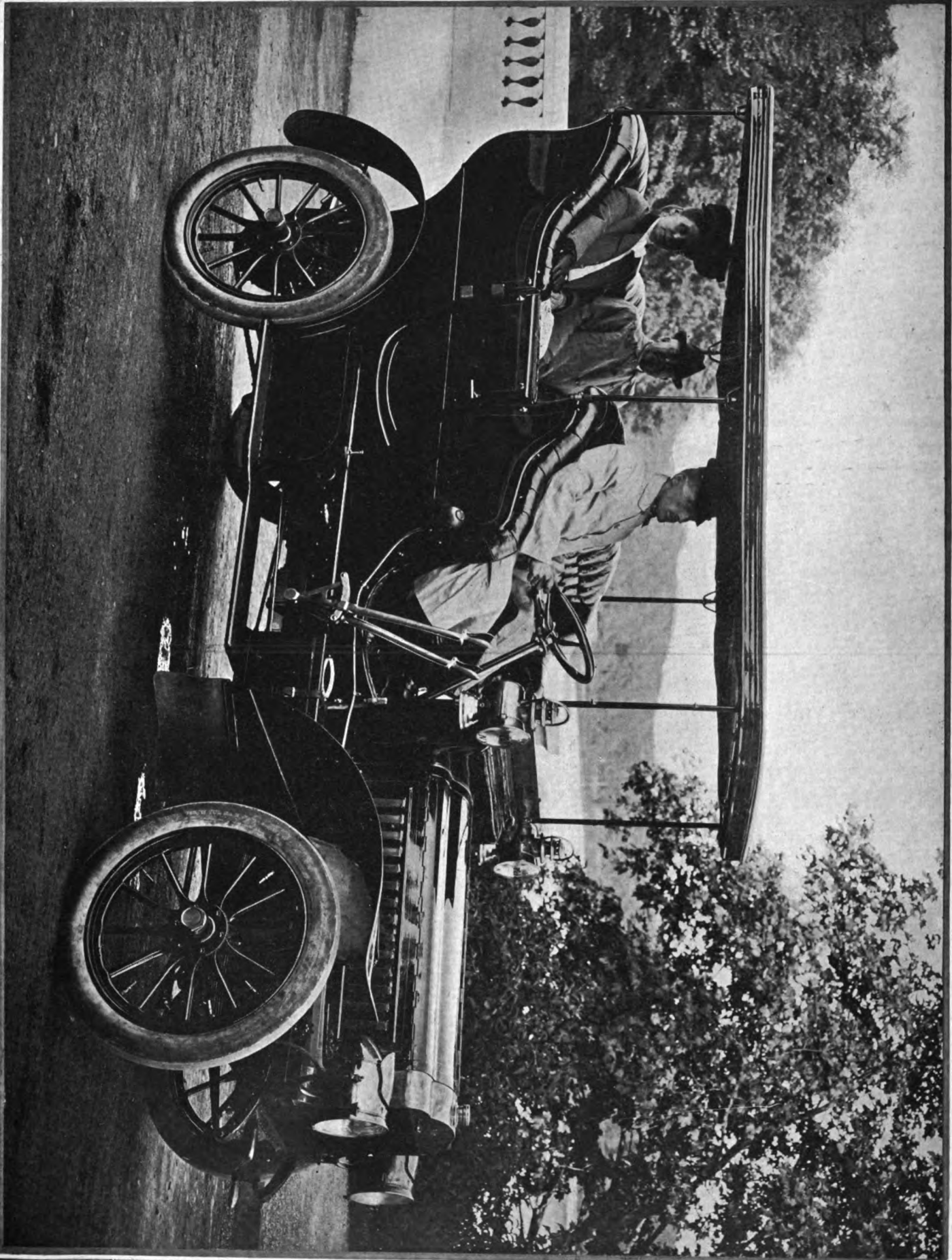
It is not easy to see where a remedy for this condition of affairs lies, or how it can be applied. We cannot even assert that it should be applied if found. Undoubtedly, every effort should be made to effect sales of the current year's goods until that year expires, or the next year's goods are actually on the market. But it would be manifestly unwise to shut off all discussion of the new patterns, even if that would attain the desired end, which is open to question.

If they must be suffered, the city-to-city record breakers will do well to keep to themselves the details of their journeys. Newspaper accounts of the number of dogs and chickens slaughtered or of pedestrians or wagons narrowly avoided serve no good purpose, while stories of driving on sidewalks and falling asleep at the steering wheel suggest that, regardless of the public and the best interests of automobilism, some of the record breakers should be saved from themselves.

The Motor World's suggestion has borne fruit. At Poughkeepsie, Mr. E. R. Thomas's drivers made their appearance on the track wearing sweaters combining the horse racing colors of their employer. It was the first move in the right direction, and provoked general and admiring comment. The sport will be served a good turn if other drivers or other employers go and do likewise. The racing man in shirtsleeves is an eyesore.

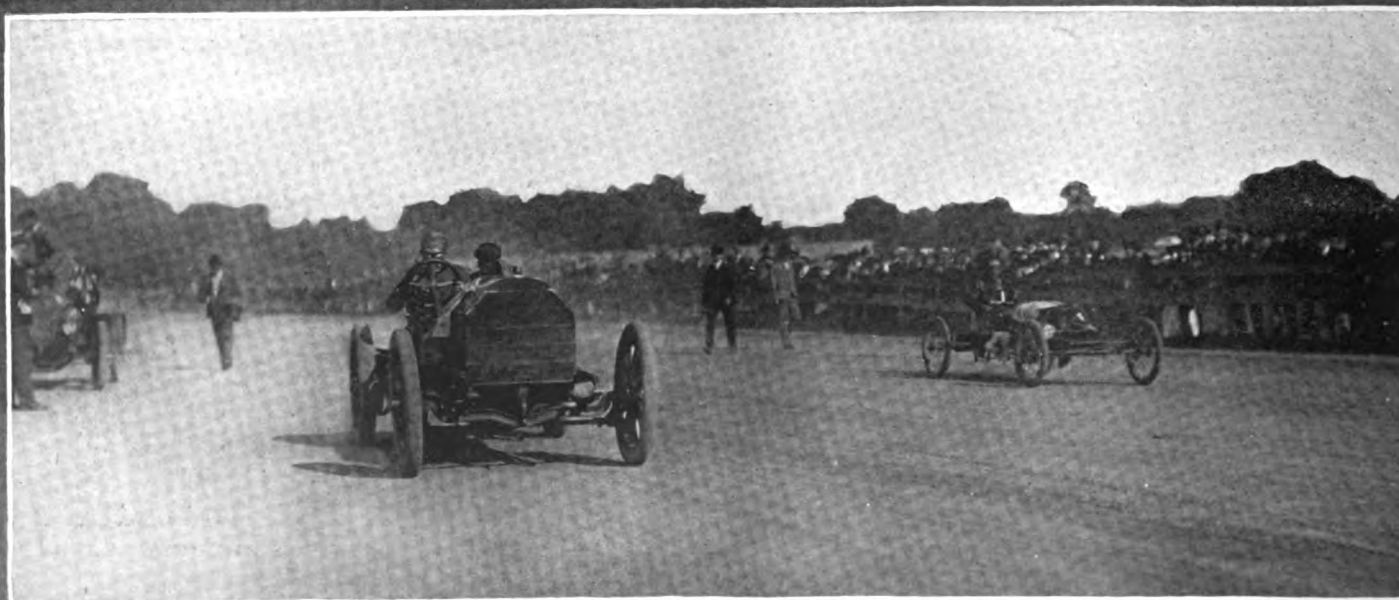
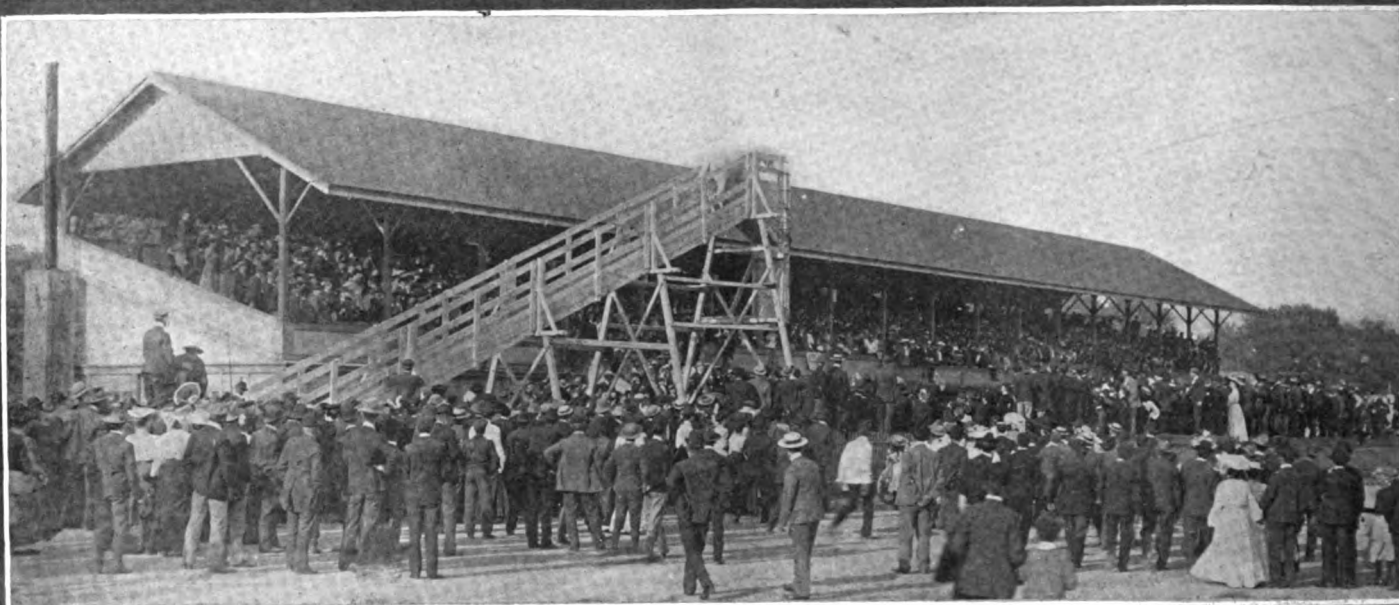
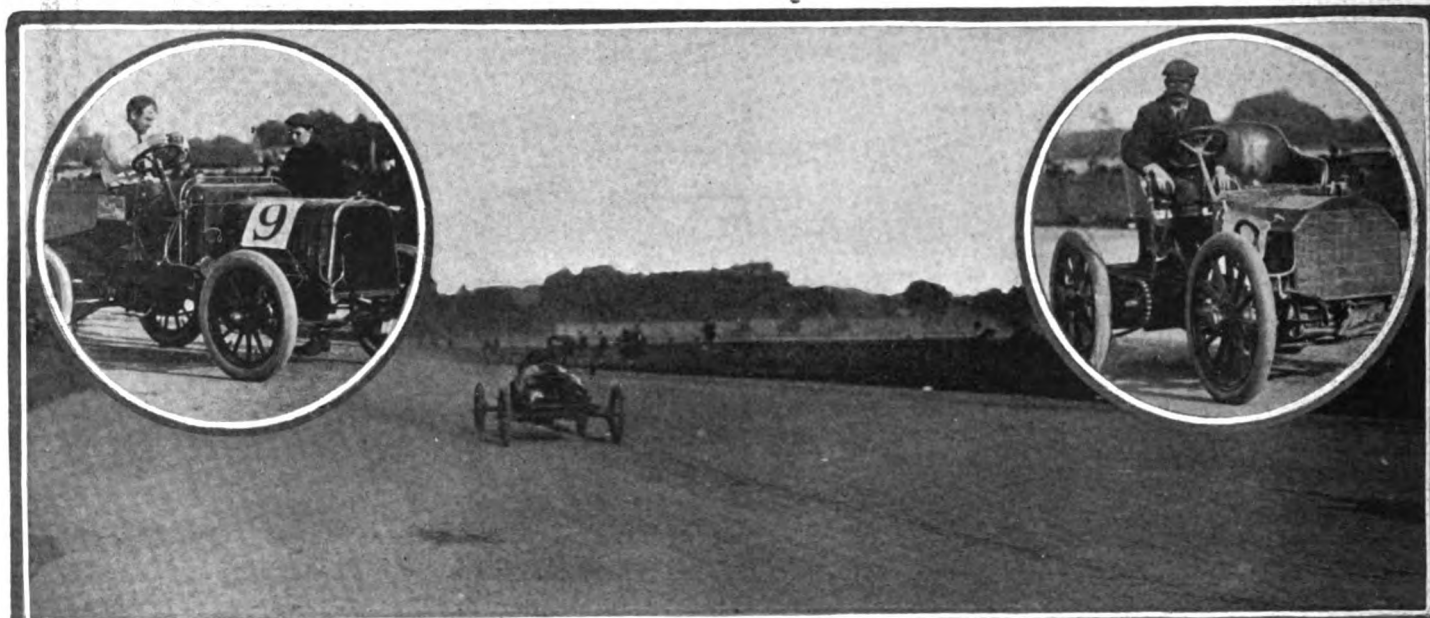
It will not be long now before fur coats, gloves and caps and similar sartorial adornments will be the rule, while anti-freezing mixtures will be cursed as well as discussed. Frozen and cracked water pipes and jackets will appear on the scene, and closed cars will become a favorite topic with motorists. As everything has its compensations, dust will disappear for a season, even although mud does take its place.

Three widely differing aspects or viewpoints of the automobile are entertained by as many classes of people, viz., the non-motorist, the new motorist and the old stager, and each of them has a direct and important bearing on the future of the industry.



MR. AND MRS. E. R. THOMAS OF BUFFALO AND THE 1906 THOMAS CAR IN WHICH THEY ARE ENCIRCLING THE EAST.

Scenes at the Poughkeepsie Meet.



LEE AND THE POPE-TOLEDO.

THE FORD "SKELETON" AT SPEED
THE GRANDSTAND AND THE DIVING HORSE PREPARING TO DIVE.
COMING UP TO THE TAPE.

J. J. ASTOR'S MERCEDES.

GREAT CROWD AT POUGHKEEPSIE

"Automobile Day" at the County Fair Attracts Country Folk—Racing was High Class.

Up at Poughkeepsie last Friday, there was an automobile race meet which was out of the ordinary in many ways. As the accompaniment to a country fair, and a bunch of races run off on a country track it was an absolute disappointment.

There were a few races, which seemed fewer because of the dispatch with which the starter disposed of them. The starter, the clerk of the course, the judges and the timers were all men accustomed to metropolitan race meets. The celerity with which they ran off the events of the programme was entirely a surprise to the country folks. According to the gate keepers' accounts, reckoned on Saturday, twenty-six thousand people were within the gates—the greatest crowd that ever had attended the fair. The country folk came because they never saw an automobile race before, but the peculiar thing about it was the New Yorkers present. From an automobile race standpoint, it can be said that the little Ford, with its two ordinary touring car cylinders, gave E. R. Thomas's Mercedes, driven by Edward E. Hawley, decidedly a good chase. If the Pope-Toledo 60-horsepower car had been present, it is probable that the best race of the season would have been seen. As it was, the Ford and the Mercedes made good races in the free-for-all (until the latter quit for lack of water), in the pursuit, which would have been better if they had gone a longer distance, and in the final of the handicap, which was won in short measure after all, although there was considerable to criticise in the nature of the handicap.

The fact that these races at Poughkeepsie were crowded, and that crowd composed of persons not only from round about the country, but also of persons who travel from a considerable distance in order to be in attendance, proved that something can be made from automobile races. Colonel John Jacob Astor, who had a car entered in the races, came in later in the day with a party, came up on the track, and stood there looking on almost as much fascinated as if it was his first race meet. Harry S. Harkness came in with a party of six, and paid his admission fee at the gate and his admission, and that of his party to the grandstand just the same as other gentlemen. E. R. Thomas, whose 60-horsepower Mercedes, driven by Edward E. Hawley, proved in the outcome to be a faster car than the Ford, came into the grounds early, and while the track was being sprinkled drove the car around the track a couple of times. A little later, just before the races were to start, he went to the superintendent of the track and politely asked if there were any objections to his going into the judges' stand. He

was told that there were none whatever. Mr. Thomas is a tall—very tall—slender, smooth-shaven man, with the stoop shoulders of a student, who looks anything but a sporting man, except when he wears the checked suit. After the races began he moved very modestly among the group of Dutchess County agricultural officials and New York City men whom the promoter had brought up to have a rest. The photographers, of whom a number from the city were present, were taking snapshots of him, and waiting again for the opportunity of better light to get other pictures. Finally, one man with Teutonic courage went up to him and asked him if he was willing to pose in his car for the photographers. The Teutonic presented an elaborate argument. Mr. Thomas paused long enough to look the man in the eyes. Then he said, "I will." Hawley backed the car up to the quarter stretch, where there was no crowd, and all the camera fiends took such shots at him as they thought proper. Mr. Thomas descended from his car with the smile of a man who has gratified some one else. His countenance relaxed immediately into that imperturbability of a man who plays the races. In another moment, the same Teutonic person who had at first proposed to him that he should pose, said to him:

"Mr. Thomas, here is a photographer that did not get in on that pose. Is it too much to ask of you to sit in your car again while he gets a picture? You know he might lose his job, as he is the only man that missed the posed-for picture."

Said Mr. Thomas:

"Why, not at all. I have been a newspaper man myself, and I know what a 'beat' means."

Mr. Thomas climbed back into the car, and a lone photographer took his picture.

Mr. Thomas a few minutes later was asked what he thought of the game. He said:

"Although my car has been in several races before, I always had Hawley drive it and allowed him to go where he chose, and really this is my first offence where there have been automobile races. What I have seen here to-day convinces me that it is a great sport. Candidly, it is a relief to get away from the horse track. Outside of that, however, I want you to understand that I mean what I say, when I express my opinion that this is good sport. I believe that the owners of high power cars should get together and support this sport and enter their cars in every race. You need not say so, but you understand the wealthy men I mean. I understand that some of the boys are going to say something about my man wearing my racing colors. I'll tell you about that. Hawley, he went off and bought a steel green majenta sweater for himself and assistant. I never suggested it, but naturally I appreciated it."

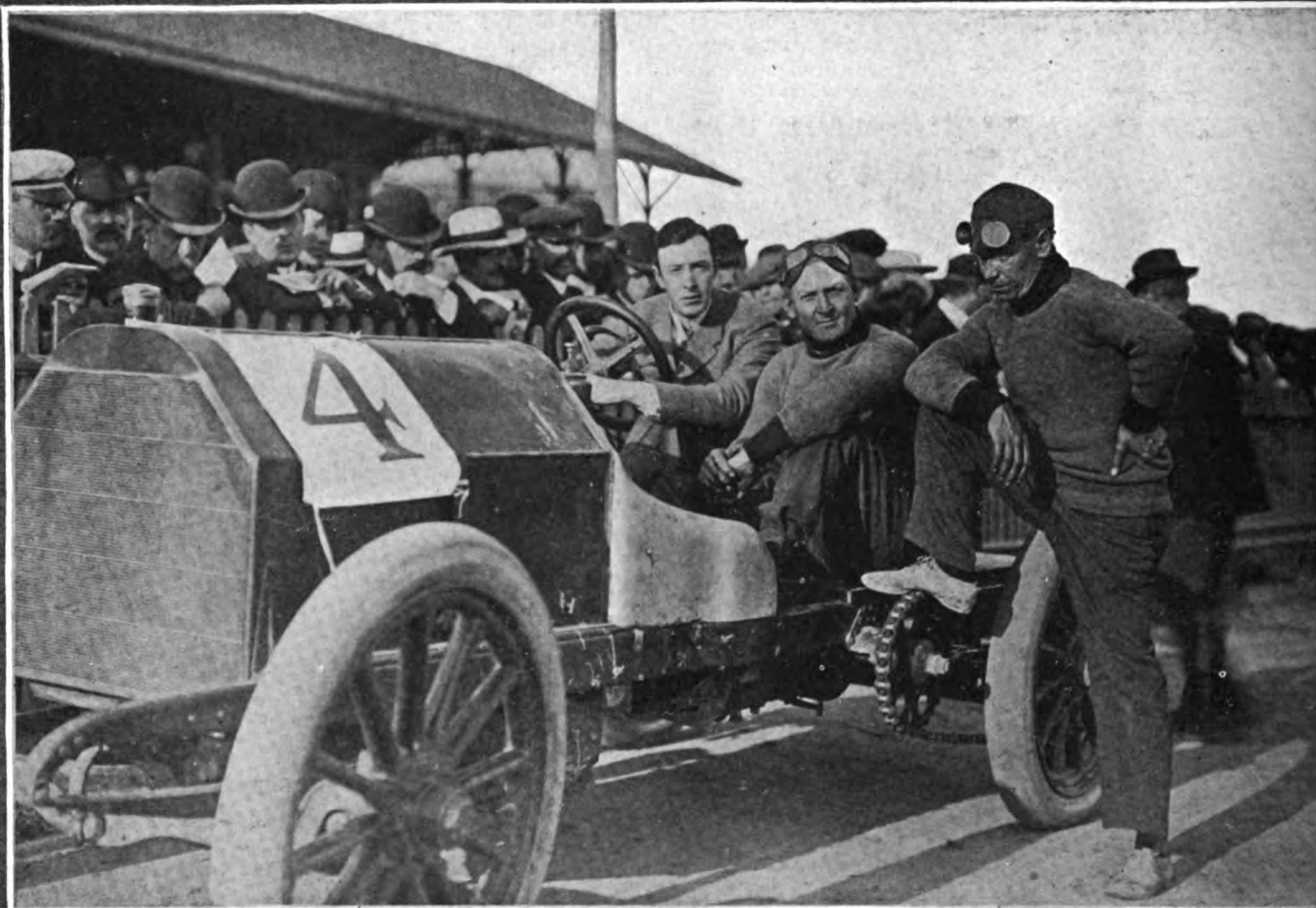
Fred Wagner, the starter, and P. J. Fisher, the clerk of the course, acted as if they were in some large city. They conducted things just as if there was an awful hurry

about it. The folks up in the grandstand and the officials of the Agricultural Society were unaccustomed to seeing affairs managed with such celerity. When it came time, at half-past four, for the diving horses to jump from the top of the incline to the muddy pool of water, a hundred feet below, most of those who had paid double price to get into the grandstand, and all of those who had paid the ordinary fee to crowd about the rail, just as if they had large accident policies, had seen more automobile races and more automobile speeding than ever before in their lives. They felt as if they had their money's worth, and the management very wisely did not put on a couple of supplement races which were billed, but finished up the handicap, and allowed the crowd to depart rejoicing—and the New York men to catch their trains.

The track was all that it was represented to be in the way of banking and its surface. The composition of it is loam and clay, with clay predominating. The sad part of it was that it had been thoroughly cut up by trotting horses for a couple of days preceding, and since then had not been rolled nor scraped nor in any way put into condition for pneumatic tires. On the turns the earth was soft. The stretches were sprinkled by watering carts in the forenoon. The turns were sprinkled from hand pots by men who drew their supplies from a barrel of Westurmite, which they mixed, four parts of water to one of the Westurmite. In July, this year, they used Westurmite on the German course to lay the dust for the Bennett cup race, but, so far as known, this sprinkling of the turns on the Poughkeepsie course was the first attempt at using it in this country. The trouble is that they did not use enough of it on the turns, and did not use it all the way around at Poughkeepsie, for there was dust enough to bother both competitors and spectators. The dust was not so great, however, as it has been at meets at such tracks as those of Providence, or at Yonkers, and it was plainly to be seen that the materials, if used more unsparingly, would sufficiently allay the dust evil. It is still a question, however, if its too liberal use might not injure such tracks for trotting horse purposes.

In the first race of the day "Eddie" Bald made his debut as a racing motorist. Piloting a 30-35 horsepower Columbia in the "Hudson" race for touring cars, he beat out Colonel John Jacob Astor's 20-horsepower Mercedes, driver by B. Morgan, but was unable to do as well with the 24 horsepower Pope-Toledo, driven by A. S. Lee. The latter finished some three hundred yards in front in the good time of 7:02.

It was almost a foregone conclusion that the ten miles, free-for-all race would go to the E. R. Thomas 60 horsepower Mercedes, with the crack E. E. Hawley at the wheel. The wiseacres proved to be right, but during the first half of the race the little 20 horsepower Ford, with double motors, put up a splendid fight. Under the skilful guid-



MR. E. R. THOMAS, OF NEW YORK, AND HIS TWO CHAUFFEURS, HAWLEY SEATED IN THE CAR.

ance of Frank Kulick, it skimmed along on almost equal terms for five miles, but after that it fell away and dropped out at nine miles. The time was fast—10:36 1-5 for the ten miles, with 1:02 4-5 for the fastest mile. A Franklin car also started, but quit at three miles.

The Thomas Mercedes and the Ford came together in the next event, a five-mile pursuit race, and a battle royal ensued. For a long time no material advantage was gained by either car, but the greater power of the German monster told and enabled it to draw away at the finish, it winning by about fifty yards. This race was also fast for the track, being 5:21.

Kulick's turn came in the fourth race, the five-mile handicap, termed the Grand Dutchess Handicap.

In the trial heat the Thomas car had to give Colonel Astor's 20 horsepower Mercedes 2 minutes and 30 seconds and the Ford 25 seconds. Colonel Astor's touring car won by an eighth of a mile, and the Ford beat the Thomas giant by fifty yards for the place. In the final readjustment of the handicaps brought about a splendid struggle, all four cars being in the homestretch when the race ended. The Ford (scratch) beat the Pope-Toledo touring car (55 seconds) thirty yards, the same distance behind coming the

Astor Mercedes (2:20), with J. Van Benshoten's Autocar (2:50) forty yards back.

The day's racing wound up with a five-mile race for Autocars, in which all the four starters were Poughkeepsie men. W. Taber got first place by half a mile, with J. Van Benshoten second and W. A. Adriance third. The summary follows:

Five miles for touring cars (free for all; stock machines)—Won by Pope Motor Car Co.'s 24 horsepower Pope-Toledo, driven by A. S. Lee; Electric Vehicle Co.'s 30-35 horsepower Columbia, driven by "Eddie Cannon" Bald, second; Colonel J. J. Astor's 20 horsepower Mercedes, driven by B. Morgan, third. Time, 7:02.

Ten miles (free for all classes)—Won by E. R. Thomas's 60 horsepower Mercedes, driven by E. E. Hawley. Time, 10:36 1-5.

Pursuit race (five miles)—Won by E. R. Thomas's 60 horsepower Mercedes, driven by E. E. Hawley; Ford Motor Car Co.'s 20 horsepower Ford, driven by Frank Kulick, second. Time, 5:20.

Five-mile handicap (open to all)—First heat won by J. Van Benshoten's 10 horsepower Autocar (4:23), driven by owner; Pope Motor Car Co.'s 24 horsepower Pope-Toledo (scratch), driven by A. S. Lee, second; Electric Vehicle Co.'s 30-35 horsepower Columbia (0:52), driven by "Eddie" Bald, third. Sec-

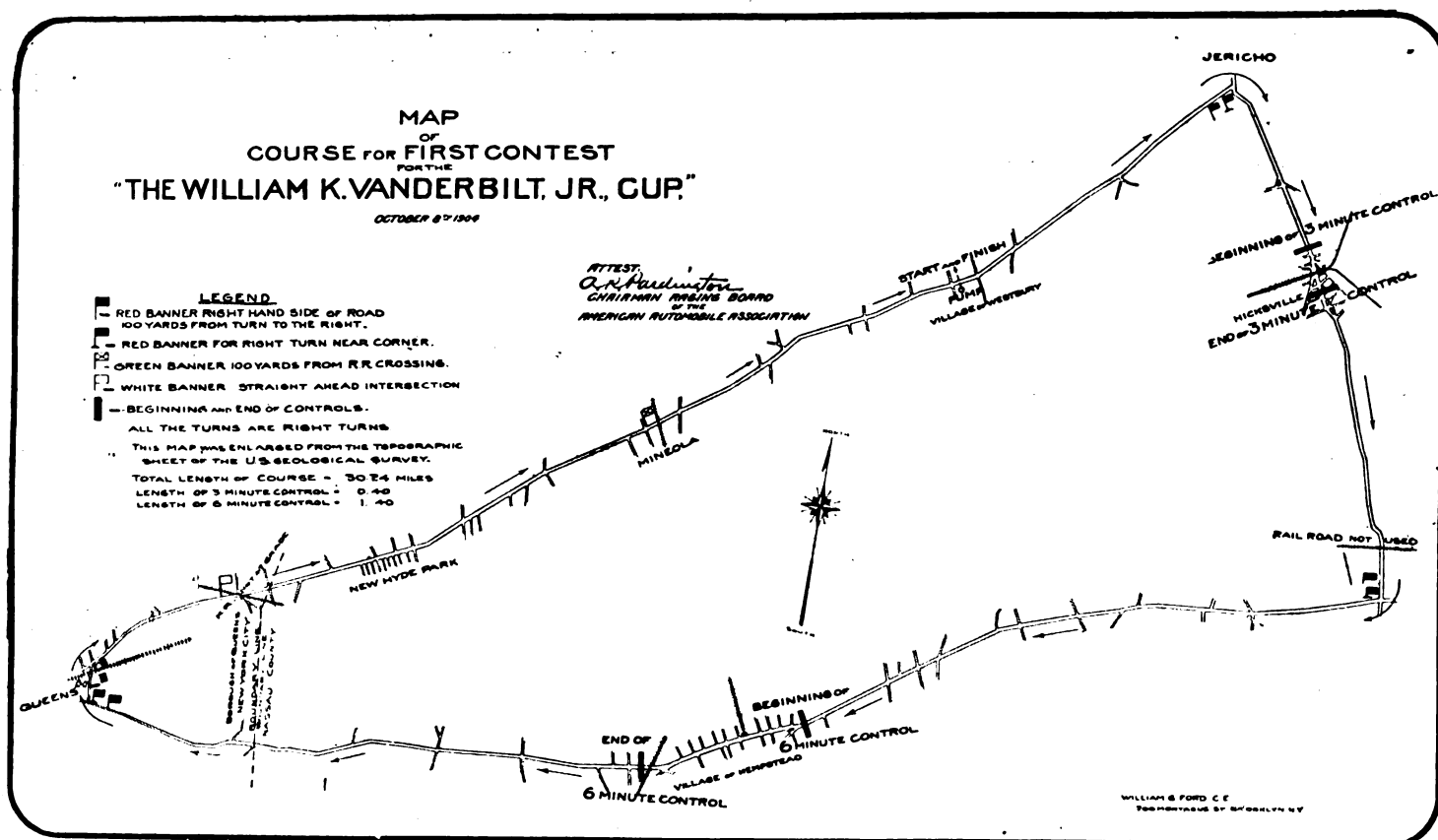
ond heat won by Ford Motor Car Co.'s 20 horsepower Ford (0:25), driven by Frank Kulick; Colonel J. J. Astor's 20-horsepower Mercedes (2:30), driven by B. Morgan, second; E. R. Thomas's 60 horsepower Mercedes (scratch), driven by Edward Hawley, third. Time, 5:35. Final heat won by Ford Motor Car Co.'s 20 horsepower Ford (scratch), driven by Frank Kulick; Pope Motor Car Co.'s 24 horsepower Pope-Toledo (0:55), driven by A. S. Lee, second; Colonel J. J. Astor's 20 horsepower Mercedes (2:20), driven by B. Morgan, third. Time, 5:24 3-5.

Five-mile special Autocar race—Won by W. Taber, Poughkeepsie; James Van Benshoten, Poughkeepsie, second; W. A. Adriance, Poughkeepsie, third. Time, 10:14 3-5.

Courses for Next Bennett Cup Race.

In addition to the famous watering place Aix-les-Bains, two French districts have made application for the running of the 1905 Bennett Cup race. They are Provence and Vichy. The French Ardennes, where the French eliminating trials were held, is also an applicant.

The races which were to have been held on Old Orchard Beach, Me., last week fizzled out. They were called off finally for the lack of entries.



In Readiness for Cup Race.

With the signing by Mayor McClellan of the ordinance permitting the use of that portion of the Vanderbilt Cup course located in Greater New York, on October 8, the only possible obstacle in the way of the great race has been removed. The eighteen entries now all bear the hall mark of regularity, the ones cabled from abroad having been confirmed by mail. The arrival of three of the foreign cars—the two Flats and the Dinsmore Mercedes—which occurred this week, and the presence of a number of the men who will drive both foreign and domestic cars, has materially quickened interest in the race, and the probabilities are that during the next two weeks a greater amount of attention will be given to it than to any automobile event ever run in this country.

The accompanying diagram of the course, which was withheld by Chairman Pardington pending the affixing of the Mayor's signature to the ordinance, will make clear its location and salient features. The exact distance covered on each circuit is 30.24 miles. Nine circuits will be made, starting and finishing at a pump in the village of Westbury. The cars will be sent off at three-minute intervals, so that it is reasonably certain that one or more cars will finish their first lap before all the others have been started. This appears to promise complications, but the precautions to prevent accidents will be elaborate and, it is hoped, effective.

Saturday afternoon a representative of the A. A. A. racing board took a party of the supervisors, engineers and contractors of Nassau County over the course, and the

latter promised to improve the roads in the several places where needed.

The racing board of the American Automobile Association has issued a bulletin calling attention to the fact that the course will be cut off to all vehicles on the day of the race from 5 o'clock in the morning until 3 o'clock in the afternoon. From New York the following route is recommended to the start and finish near Westbury:

Take the East Thirty-fourth street ferry to Long Island City, the Hoffman Boulevard to Jamaica, the Merrick Road to Rockville Centre or Freeport, and thence ride north to Hempstead, Garden City and Mineola and east to Westbury.

Brighton Beach Names Its Date.

Saturday, October 22, has been selected as the date for the annual meet at the Brighton Beach track, Brooklyn, N. Y. This is just two weeks later than the Vanderbilt Cup race, and an opportunity will thus be presented for the contesting cars in the latter to wait over and show their speed capabilities on a circular track. The latter is, as is well known, a mile circuit, wide and safe even at high speed.

The meet will be held under the auspices of the "Brighton Beach Automobile Club." In 1902 and 1903 the Long Island Automobile Club was the promoter. Alfred Reeves, No. 150 Nassau street, New York, is manager of the new organization.

Rockford, Ill., has changed the dates of its forthcoming race meet to October 5 and 6, in order not to conflict with the Chicago club's dates. The latter are September 30 and October 1.

Tame Sport at Albany.

Poor handicapping, and a narrow, dusty track with sharp turns combined to furnish tame sport at the meet held at Albany, N. Y., last Saturday afternoon. The sharp turns gave the small cars a distinct advantage, and the ten-mile open was an easy victory for the Ford, driven by Kulick. Kulick lapped Mallet's 24 horsepower stripped Peerless, driven by Savage, in the sixth mile, and at the finish was a quarter of a mile ahead of the Pope-Toledo, driven by Soules. Kulick did not start in the five-mile handicap for gasoline cars, in which event he was on scratch. Summaries:

Three-mile motorcycle—Won by Roy Robinson (Indian); Carl Robinson (De Dion), second; C. Matthews (Kelecom), third. Time, 9:27.

Ten-mile open—Won by F. Kulick (Ford); C. Soules (Pope-Toledo), second. Time, 12:09.

Five-mile handicap, for air cooled cars—Won by T. Lowe (Franklin, owned by Thomas Hun), two miles; W. F. Winchester (Franklin), scratch, second.

Five-mile handicap, for gasoline cars—Won by A. S. Robinson (Buckmobile), one mile; J. Lucy, jr. (Cadillac), one and a half miles, second; W. F. Winchester (Franklin), one and a half miles, third.

Five-mile handicap, for heavy gasoline cars—Won by C. Soules (Pope-Toledo); Savage (Peerless), second. Time, 6:21.

Five-mile championship handicap, for m. m. members of Albany Automobile Club—Won by James Lucy (Cadillac), two miles; Frank Fisk, jr. (De Dion-Bouton), three miles, second.

BERKSHIRE'S FIELD DAY

No Speed Monsters There, and Club Men Eat Clams as Racing Appetizers.

Pittsfield (Mass.) motorists and their friends turned out in force at Pleasure Park, that city, on Saturday last to witness the second annual field day of the Berkshire Automobile Club, and were rewarded by seeing some interesting contests. The racing was preceded by a clambake, which was discussed with gusto by the club's gourmets.

The opening contest was a five-mile touring car race, in which there were five entries. In the finals there were Franklin Weston, of Dalton (20 horsepower Winton); Alden Sampson (16 horsepower Moyea), and G. E. Sweet, of Sheffield (16 horsepower Locomobile). The contestants finished in the order named, Weston's time being 9:11.1-5. Samuel G. Colt (Columbia), Dr. George H. Hubbell (Knox), C. C. Chesney (Stevens-Duryea) and Dr. O. S. Roberts (Ford) were the starters in the two-mile race, open to cars weighing under 1,700 pounds, the Ford car passing under the wire an easy winner; time, 4:37½. The one-mile race, for cars weighing under 1,000 pounds, was omitted, as was the five-mile stock car race, open to manufacturers and dealers. There were no entries for either event.

Dr. F. W. Brandow, president of the club, next gave a one-mile exhibition dash against time, and finished in 2:25.3-5. The one-half-mile dash, for steamers, brought out two Grout machines, owned by Dr. O. S. Roberts and City Treasurer Kennedy, respectively, the former carriage being of 10 horse power and the latter 6½. The Roberts automobile was driven by Floyd Knight, and won easily. The time was 0:56½. The meet closed with a two-mile handicap, which was the most exciting race of the meet. Because of Weston's record he was placed on scratch, and Sampson and Floyd Knight were given handicaps of 260 and 2,200 feet, respectively. Knight won because of the big start given him, the official time being 3:42. Weston overhauled Sampson on the second lap, and it was then a neck and neck race to the finish. The spectators cheered loudly as the machines came down the track on the last half mile, Weston's car winning by half a length.

Whitman Spends Time at Syracuse.

L. L. Whitman, the transcontinental tourist, has been spending some time at Syracuse, N. Y., before returning to California. Speaking of the extraordinary time he made from San Francisco to New York, Mr. Whitman said he attributed much of his success to the absence of tire trouble. He used Diamond stock tires.

The Albany (N. Y.) Automobile Club was incorporated last week with a capital stock of \$500.

Why the Tire Man Wanted Him Fined.

Because Dr. J. P. George, an Indianapolis motorist, who was arrested for scorching, would not enter a plea of guilty, J. A. Swinehart, of the Swinehart Clincher Tire & Rubber Co., of Akron, Ohio, was a much disappointed man last week. He happened to be in Indianapolis when the case came up, and he put in an appearance at the courthouse without delay. When the judge adjourned the case Mr. Swinehart expressed his regret.

"You see, it is this way," he said after court had adjourned. "The doctor uses our tires on his automobile. Rival concerns all over the country have been 'knocking' our tires and giving out alleged expert opinion to the effect that no machine fitted with them can run at a higher rate of speed than twelve miles an hour. If I can only get the court to find that machine was going at the rate of thirty miles an hour, or something like that, I can take some of the wind out of those fellows' sails."

Prosecutor Hack then obligingly consented to let the judge take up the case, have Dr. George plead guilty to running at any old rate so it was greater than eight miles an hour, the speed limit; have a fine assessed, and let Mr. Swinehart pay the fine, but the doctor declared he expected to beat the case when it came up for trial. Mr. Swinehart says that he expects to watch for accounts of that trial if he is one thousand miles from Indianapolis on the date.

Mail Vote Will Decide Tour.

It appears that the projected fall run of the Automobile Club of America is still hanging in the balance, instead of being a certainty. Undeterred by the Gettysburg fiasco, however, Chairman Emerson Brooks of the runs and tours committee of the Automobile Club of America has mapped out a tour to Delaware Water Gap and Atlantic City, and postal cards have been sent to each member of the club asking if they desire to participate. Providing a sufficient number of favorable replies are received stating that members will participate, the tour will be held, otherwise the club will abandon the idea of having one this fall.

In case such a run is held, it is proposed to start it on Monday, October 10, two days after the Vanderbilt race, and take a five days' trip, including Port Jervis, Delaware Water Gap, Philadelphia, Atlantic City, Lakewood and New York.

Railroads May Adopt Gasolene Power.

So favorably impressed with the gasolene engine is the Dunkirk, Alleghany Valley & Pittsburg Railroad, running from Dunkirk to Titusville, that it will shortly, it is reported from a reliable source, equip its cars with motors and experiment between Falconer and Warren, Pa.

The Jamestown, Chautauqua & Lake Erie Railroad Co. has also made a successful experiment with a car propelled by gasolene. The company expects to equip its whole line in the near future for passenger use.

ATTACKED 24-HOURS RECORD

Doerhoefer and Katz Attempt the Feat at Louisville, but a Fence Stops Them.

What was to have been the chief feature of the Louisville (Ky.) meet last Saturday, the breaking of the twenty-four-hour track record by L. P. Doerhoefer in a 24 horsepower Peerless, came to an abrupt end early Sunday morning by the machine running into the fence. At the time of the accident, 10 hours and 50 minutes after the start, 386 miles had been covered.

Shortly before the accident Doerhoefer had turned over the machine to Frank Katz, who was driving when the accident happened. Katz was caught between the fence and the machine, but no bones were broken and his injuries are not of a serious nature.

Several races were run earlier in the afternoon. Summaries:

Two-mile open—Won by James Allen (Cadillac); Dr. W. T. Durrett, second; G. L. Mottler, third. Time, 4:21.

Three-mile race for double cylinder machines—Won by J. S. Tracey (Winton). Time, 5:50.

Five-mile handicap—Won by L. P. Doerhoefer (scratch). Time, 6:58.

Chicago Will Use Harlem Track.

Chicagoans are preparing to make a success of their two days' race meet, to be held on the Harlem track on September 30 and October 1. A programme has been prepared, comprising seven events on the first and eight on the second day, and including a gymkhana.

The Harlem track is a mile circuit, and is said to be very fast. A party of clubmen drove out to it last week and tried it, doing a mile in 1:15. A member of the Chicago club's race committee said regarding it:

"The turns are excellent, gradual and wide, and I think, no matter how fast the competitors drive, there will be little danger of accidents. We intend to follow the course of other race officials and sprinkle the track with oil to remove the danger of a smash-up by dust obstructing the drivers' sight."

One Race for Each Class.

October 1 is the date selected for the next Philadelphia race meet, which will be run, as was the one last spring, on the Point Breeze track. The programme is as follows:

Event No. 1—Fifteen miles for heavyweights, 1,432 to 2,204 pounds.

Event No. 2—Ten miles for middleweights, 881 to 1,432 pounds.

Event No. 3—Five miles for lightweights, 551 to 881 pounds.

Event No. 4—Great Point Breeze Handicap at five miles.

Event No. 5—Fifteen miles for 24 horsepower touring cars to carry four passengers all told, averaging at least 140 pounds.

COURT E JOINS SUPERVISORS

Suit to Stop "Hold-Ups" on Long Island Shows Profitable Nature of the Business.

After a superabundance of talk, action has at last been taken to put a stop to the "stand and deliver" methods of "b'gosh" constables which have long terrorized motorists who use Long Island roads. At Riverhead, L. I., last week injunction proceedings were begun by the Automobile Club of America in the name of a Suffolk County taxpayer, to restrain the Board of Supervisors of the county from paying the claims of certain deputy sheriffs for the \$25 reward offered for the arrest of violators of the automobile speeding law. Supreme Court Justice Smith, at Patchogue, signed the temporary injunction, which was served upon Chairman Miller of the Board of Supervisors immediately.

The service of the papers was made by Attorney John J. Cunneen. Mr. Miller explained the matter to his colleagues, and it was taken and referred to the board's legal adviser for action. P. R. Gordon McNiel, of New York, a travelling salesman of a Manhattan furniture house, who has a handsome summer home on River avenue, Patchogue, is the complaining taxpayer, selected by the automobile club, to prosecute the suit commenced against the supervisors.

The affidavits allege that the action of the supervisors on October 13, 1903, in requesting the District Attorney to offer a reward of \$10 for the arrest of offending automobilists and the further action of the board on June 15 last, in requesting the county's legal adviser to increase the reward to \$15, are illegal official acts, unwarranted by law and in excess of their powers as supervisors. It is also alleged that the acts are in violation of the Constitution of the State of New York.

Justice Smith's injunction order is a sweeping one, and reads that the supervisors "are restrained during the pendency of this action from auditing, allowing or directing the payment of the claims presented as alleged in the complaint, and from levying, assessing or raising upon the town of Brook Haven or upon the property of the plaintiff, McNiel, sums in payment of such records. The complaint enumerates several claims which were presented to the board on Tuesday, one of which, that of Deputy Sheriff James E. Welch, of East Moriches, amounts to \$500.

Welch's itemized bill shows a total of five days "arresting" in July, when he captured fourteen automobilists and three days in August, when six arrests were made. Miles & Johnson, of No. 11 Wall street, Manhattan, are the attorneys in the case, John H. Cunnon, of the firm, appearing in the present proceedings. The trial of the suit will probably be held at the spring term of the Su-

premise of counsel before Justice Smith, at Patchogue, or unless the supervisors seek to vacate the order, which latter proceeding is very unlikely from the attitude of the board. At the session of the supervisors yesterday a motion was passed that all bills for awards for arrests of violations of the automobile law be referred to the District Attorney for his approval.

Chairman Floyd of the Brook Haven Committee of Safety, an anti-auto organization, appeared before the supervisors Saturday, requesting a continuance of the present method of enforcing the auto law.

Stern Truths Concerning Speed Laws.

For a graphic yet precise delineation of the present state of official persecution of motorists, under the guise of enforcement of the law, the editorial given below, taken from the Springfield (Mass.) Union, is facile princeps. It does not mince words or beat about the bush. In straightforward words and trenchant phrases it depicts the "hold up" methods in vogue in many sections of the country, and closes by stating in a few well chosen words the simple, easily applied remedy. The Union says:

It is undeniable that the laws enacted by the different States for limiting the speed of automobiles, are faulty almost to failure, because of a wrong or mistaken method of protecting the public safety. For the laws have not stopped speeding by the multiple millionaires, but have sanctioned the most outrageous and brazen-faced highway robberies under the guise of law which have ever been practised in this country since the early days of the bicycle. Down in Connecticut, autoists are being "held up" daily, no matter at what speed they are going, on lonely roads where there is not a living creature in sight, except the crafty men who claim to be "officials," and they demand from \$15 to \$25, because, as they say, with a four-dollar watch in their hands, the harmless autoist has gone three or four seconds too fast over a stretch of highway. Highway robbery at the point of a revolver is not a whit less honorable, and the victims are helpless in the clutches of such men.

The whole purpose and intent of the law, is the protection of public safety, and the fatal fault in all existing legislation on the subject is in designating a speed limit which has proved useless, when the law ought to punish or prohibit reckless driving at any speed whatever when endangering the public safety, whether at three or thirty miles an hour. The legal limit of speed in towns would be absolutely dangerous at times, and perfectly safe at other times, and the same is true upon country roads, so that the element of endangering the public safety should be the basis of arrest and punishment for reckless driving.

There will be automobile races at Canton, Ohio, on September 28. The Canton Automobile Club has them in charge, and will run them in connection with the Stark County fair.

GLIDDENS REACH VANCOUVER

They Complete Long Drive on Railway Tracks, in Picturesque Country—The Lessons Learned.

Upon arriving at Vancouver, B. C., which took place at 2 p. m. on Sunday last, the Glidden party of world girdlers had travelled 3,536 miles in traversing the American continent, starting from Boston, Mass. Furthermore, they had made an entirely new record, that of driving 1,803 miles on steel rails, the entire distance from Minneapolis to the Pacific Ocean having been covered without leaving the lines of the Canadian Pacific Railway. This feat was remarkable in itself, and undoubtedly marks an epoch in railway travel.

The run of 1,803 miles upon the railroad tracks was made in sixty hours out of twelve days at a speed of thirty miles an hour. To maintain this speed the average on the prairies was increased to thirty-five miles and lowered in the mountains, which covered the district from Calgary to Mission Junction, a distance of 600 miles. The ride for the entire distance was at an average of 150 miles a day, and was one of ease and comfort. The run down from Glacier, B. C., was through the Albert canyon on the brink of several deep fissures in solid rock, walls of which rise straight up hundreds of feet, with the river three hundred feet below. At Revelstoke, forty-three miles east, the Columbia River was crossed into the Eagle River canyon.

The traffic on the road was unusually heavy. Four times a month solid trains containing raw silk cross the continent, some bound for New York and some for Europe, and carloads of Pacific Coast halibut daily go over the road, destined for Boston, in addition to a large quantity of salmon.

Descending the mountains, it was found that on a 5 per cent grade down to 3 per cent ten miles an hour was the limit of speed for safety, and that on a 2½ per cent grade twenty-five miles an hour could be maintained.

When the tracks were wet and the showers quite heavy unusual care had to be taken on the curves in order to stop quickly, for, going thirty miles an hour, a sudden application of the brakes would lock the wheels, causing them to slide, and they would slide half a mile before stopping.

The drive on the last day of 129 miles, through the Fraser canyon, following the course of the Fraser River, in and out of the Cascade range of mountains, was picturesque, and gave a pleasant ending to the long journey.

Only once was the party in danger, when the car struck a plank near Glendon, Minn.

The Napier car will now be equipped with its rubber tired wheels, and after the sea trip will continue its journey touring the world, beginning at Honolulu about Christmas, then will follow Fiji, New Zealand, Australia and countries of the Orient.

HOW SHARP STOPPED HOLD-UPS

Showing How a Determined Man Can Cope With Motorphobes When he Elects to do so.

What can be accomplished by a determined man or organization when actuated by the proper spirit is well illustrated by the fruits of the fight waged by L. B. Sharp, of Far Rockaway, N. Y., against the village of Lawrence, Long Island, where a youthful justice, Tyson by name, did a thriving and profitable business of gathering in automobilists until he fell afoul of Mr. Sharp, who finally challenged his right to hold office. The several developments of the case were duly recounted by the Motor World.

The village has now crawled abjectly, and whether or no Justice Tyson retains his office his wings have been so clipped that he will no longer find it profitable to engage in the hold-up business. To make his doubtful tenure legal, the village officials have formally reappointed him, and at the same time fixed his salary at \$200 per annum. Previously his compensation was subject to the fines he imposed. Nor will he longer have a monopoly of dispensing "justice" in Lawrence, as at the same time the officials designated Archer B. Wallace, of Freeport, acting police justice of Lawrence. A year or so ago Wallace himself tried Tyson's tactics, and learned to his regret that they did not wholly pay. In speaking of the matter a few days since Mr. Sharp said:

"At the time of my arrest I was operating a small electric runabout, the maximum speed of which under the best conditions is about fourteen miles. I was not aware that an ordinance had been passed by the village of Lawrence limiting the speed of vehicles to ten miles, and while firm in the belief that even that speed was not being exceeded at the time, it is a very hard matter to speak positively on this point in the absence of any speed recording device. It was, therefore, the charge on the part of the officers making the arrest that one-quarter mile had been covered in 55 seconds which was objected to, not that the arrest had been made.

"I also seriously objected to the absurdity of the enforcement of a ten-mile ordinance as well as to the method the village was employing to make arrests, viz: Three telephones located a quarter of a mile apart, with a man stationed at each telephone, the plan being that when the vehicle passed the end telephone, travelling in either direction, the signal would be given to the middle station, the attendant at which would start his stop watch, noting the time it required for the vehicle to cross the middle line, when he would telephone to the deputy a quarter-mile distant in the direction of travel to arrest the alleged offender upon his arrival at that station.

"The most serious objection to this plan of making arrests was the fact that the tele-

phones had been so arranged, back from the road in the shrubbery, as apparently to make sure that no warning sign might appear on the highway whereby the success of the deputies might in any way be marred; in other words, it seemed quite evident that the whole system had been arranged with the view of making the greatest number of arrests possible, and not with the idea of upholding the majesty of the law and protecting the travelling public. Had this been the object in view one or two arrests, to which wide publicity might have been given, would have accomplished the desired result, and would have been applauded by every one, including, I dare say, 95 per cent of automobile owners. Later, upon my arraignment, it transpired that the justice had himself taken the time, decided that the ordinance had been violated, ordered the arrest and presumed to sit in judgment on the case, which could only be taken as further evidence that the idea was not to mete out justice and uphold the law.

"I therefore decided to fight the case to a finish at any cost, not with any idea of obtaining justice in the court, but in order that the ridiculous situation might be brought to light and the village officials made to realize the weakness of their position.

"At this time I had no idea of any existing flaw in the legality of the justice's appointment. This was found later, and was taken advantage of only because of the evident fact that no justice could be obtained in the court, and that a conviction would be the outcome whatever the merits of the case might be, and in order that the slipshod manner in which the official business of the village was being transacted might be further demonstrated.

"The application to Justice Dickey, in the Supreme Court, on a writ of prohibition was made only with the idea of having the police justice restrained from passing judgment until quo warranto proceedings could be tried out through the Attorney General. In this we failed because a writ of prohibition only holds against a real judge about to exceed his authority, although Justice Dickey would undoubtedly have decided the matter had not the other side raised technicalities. It was therefore apparent that the village officials did not desire to have the legality of their acts determined, but were most anxious to prevent us showing up the reverse. It then, of course, became necessary to rely wholly on quo warranto proceedings, the beginning of which does not act as a stay; we therefore had to submit to the passing of judgment by Tyson.

"The amount of the fine and the language employed by the justice in passing judgment clearly demonstrate the spirit in which the case was being handled, and justify the idea that I at no time had a show of obtaining justice. The quo warranto proceedings, of course, became unnecessary because of the practical admission of the village officials that they had been wrong, as shown by their action on September 8 in formally reap-

pointing Tyson and in fixing his compensation.

"The fruits of the case may be appreciated to some extent by the fact that only one automobilist has been arrested since the day of my arrest, August 7, which arrest was made on the charge of operating an unnumbered vehicle. The speed limit has been increased to eighteen miles, and, in fact, the officers have been instructed to make no arrests unless the vehicle covers a measured quarter-mile in less than 50 seconds.

"It has been plainly shown to the village officials that a legal arrest cannot be made by use of the telephone arrangement they had employed, which has resulted in its abandonment. The officials have been forced to legally appoint the justice and provide for the payment of a salary without fees, thus removing any possible incentive to make wholesale arrests. In addition to all this, they appointed an acting police justice, which means that one man will not have exclusive jurisdiction in the village. Finally, above and beyond all, the village officials have been brought to a realization of the fact that it is much safer to provide for the legal arrest and prosecution of citizens, whatever their alleged offences may be, than to go about it as though it is a matter over which to make a holiday and have a good time generally."

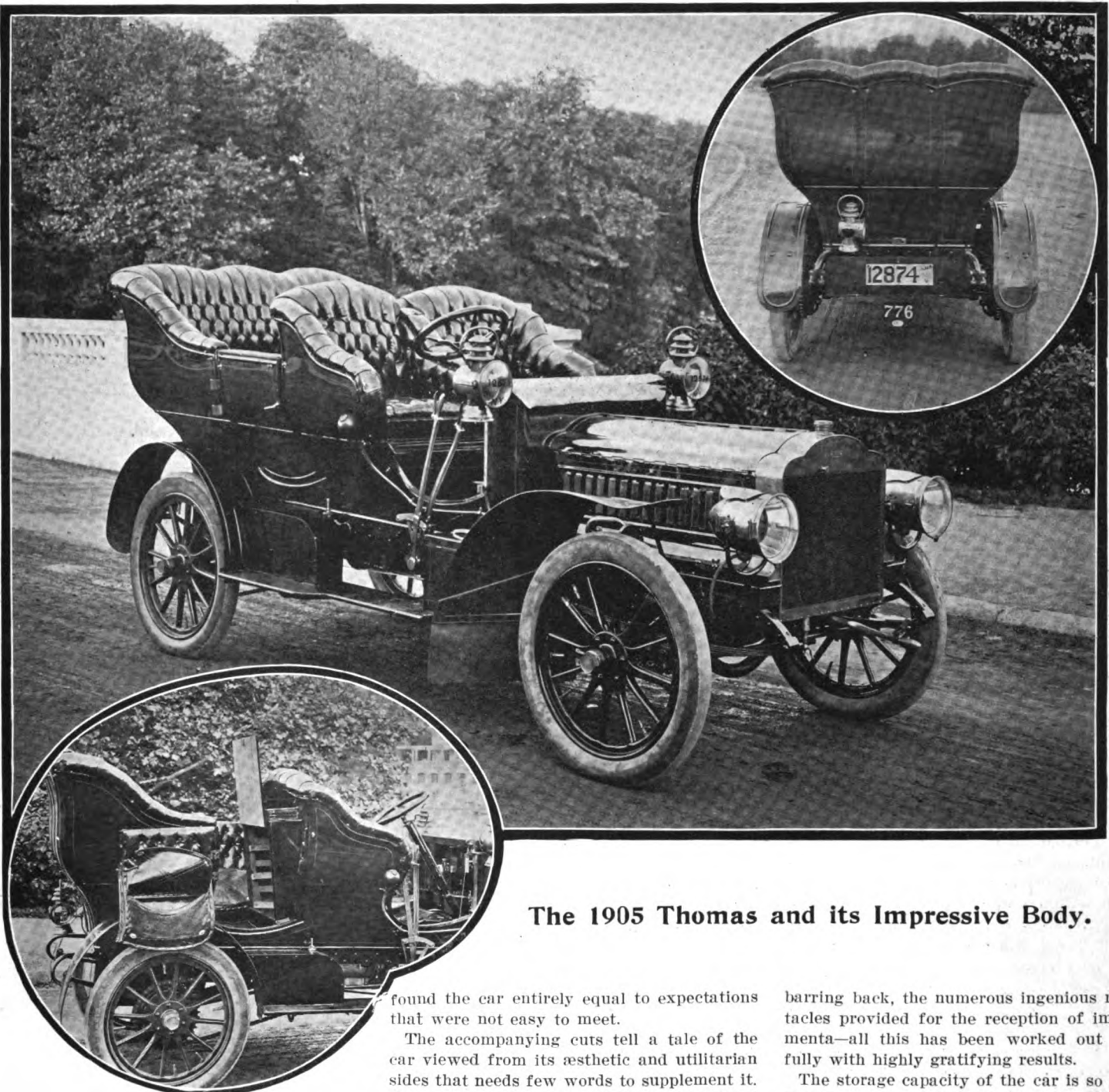
Salvationist Lets Fall Opinions.

"What do I think of automobiling, now that my trip in one of them is over?" queried General Booth of the Salvation Army in reply to the question asked on his return to London from his tour from Land's End to Aberdeen. "Well," with a mischievous twinkle in his eye, "I don't think any man ought to start motoring unless he is prepared to die at full speed. If I were a manufacturer I would leave all swell cars to the French and turn my attention to a car for the butcher, the grocer, the doctor and the tradesmen, so that they could keep them for business and pleasure. It wants to be cheap, good and substantial. The trip has resulted in a lot of prejudice against the Army being removed from the minds of the people."

Russia Takes a Tip From Japan.

Evidence that the Russians are taking cues from their adversaries reached Detroit last week in the form of an order for several Oldsmobile railway inspection cars. They are to be used for war purposes on the great Siberian railroad, the order calling for immediate shipment. Japan ordered a number of the same vehicles early in the year.

A Mishawaka (Ind.) farmer has offered the local police aid in suppressing automobile scorching. He suggested the placing in the roadway of a device consisting of two sharp blades, which can be electrically raised by touching a button in the office of a chief of police. A car running at a speed in excess of the limit will have its tires cut beyond repair when it reaches this ingenious little trap.



The 1905 Thomas and its Impressive Body.

SHOWING TWO OF THE STORAGE COMPARTMENTS.

New York was given its first glimpse of the 1905 Thomas line this week, when Mr. E. R. Thomas reached this city prior to entering on the last arc of his three thousand-mile swing around a gigantic circle. Accompanied by Mrs. Thomas, the well known Buffalo manufacturer left that city several weeks ago, bent on putting to a practical test the comfort, reliability and practicability of the new 30 horsepower side door entrance Thomas touring car. Included in the points to be visited were New York, Washington, Boston, Portland, Montreal and Toronto. It almost goes without saying that the tour has been an enjoyable and successful one. Mr. Thomas is the picture of health, and he has

found the car entirely equal to expectations that were not easy to meet.

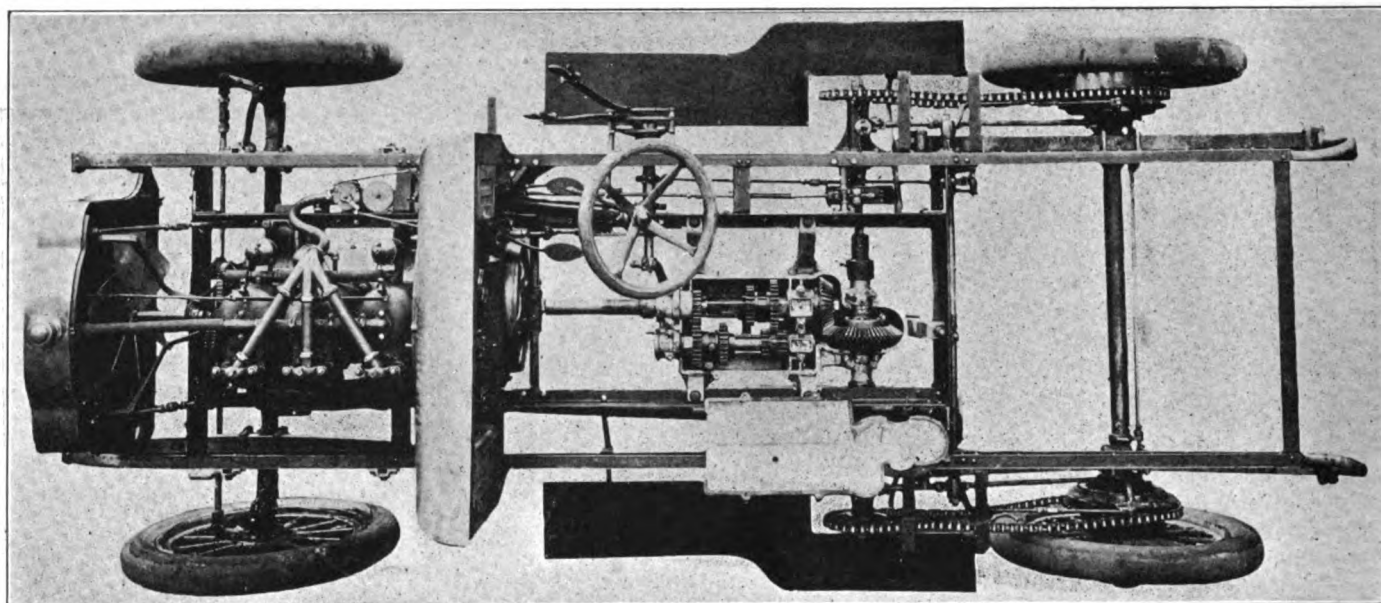
The accompanying cuts tell a tale of the car viewed from its æsthetic and utilitarian sides that needs few words to supplement it. The acme of luxuriousness has been aimed at—and obtained. The design of the car is such that the highest efficiency in running is assured, while everything that can contribute to the enjoyment of its occupants has been incorporated in the body. The result is a Pullman car of the highways—a vehicle that for easy riding, freedom from the clouds of dust that follow in the wake of most swiftly moving vehicles, and facilities for the stowing away of such baggage as even the most Sybaritic traveller could desire, could not be surpassed.

The body design is the work of Mr. Thomas himself. The desideratum in a luxurious body is found here—roominess, luxuriousness and accessibility. The generous width of the sides of the tonneau, the graceful curves of these sides and of the high, dust

barring back, the numerous ingenious receptacles provided for the reception of impedimenta—all this has been worked out carefully with highly gratifying results.

The storage capacity of the car is so great that the use of side baskets, hampers, etc., is quite unnecessary, although they can be attached if desired. There are three main receptacles for the bestowal of baggage, all of them concealed, yet easily accessible. That under the tonneau seat has a capacity of 4,752 cubic inches. Back of the front seats, and in the tonneau, is a second space, designed to hold suit cases or similar articles, with 4,388 cubic inches, while under the tonneau floor is a tire and tool box, and under that a second tool box, the two having nearly 6,000 cubic inches. In addition there are pockets in the upholstery of each door and on either side in front of the seat, as well as room on top of the canopy for umbrellas, canes, etc.

The wheel base has been increased to 104 inches—thus insuring smooth running. The



CHASSIS OF THE 1905 THOMAS TOURING CAR.

standard engine is the three cylinder type developed so successfully this year, and giving 24-30 horsepower; but four and six cylinder engines will also be furnished.

Especial attention has been given to accessibility and to making the wearing parts large and strong. Each cylinder is cast separately, so that any cylinder, valve, piston or other part can be replaced or adjusted without interfering with other parts. The crank shaft bearings are of generous size, measuring as follows: Flywheel side, 4x2 inches; opposite side, 3 11-16x2 inches; two centre bearings, 2 1/4x2 inches; wrist pin, 1 1/8x2 1/2 inches. All valve poppets are forged from high grade nickel steel. All bearing boxes are superior white bronze, which insures smooth running and long life.

All parts perfectly interchangeable. Crank axle and flywheel can be removed without taking motor from frame. Oiling is by splash and chain system, which proved so efficient the past season. An improved positive force sight feed system for cylinders is located in dash.

The transmission is of the sliding gear type, three forward speeds and direct on the high with any gear in mesh, thus saving 10 per cent in power and 20 per cent in noise.

All gears and inside bearings run in an oil bath, and the four outside cylinder journals are equipped with very efficient chain oilers: thus at all times this important part is sure of ample lubrication. One full supply of oil is good for from five hundred to one thousand miles on the road.

Motor and transmission are carried on a substantial cut channel steel frame, which has during the last season proved itself exceptionally well adapted to severe work.

The Thomas dashboard of rolled steel, housing the coils, commutator, force feed oilers, and having on either corner lockers for tools and spare parts, is not duplicated on any other car in the market. A brass dip

pan in bottom keeps front mat clean and neat.

The safety device in brake drums of rear wheels, to prevent backing down on steep hills, will again be a feature. Several bad accidents have been averted by this means, and all Thomas car owners speak in the highest praise of its merits. By its use the car cannot back more than five inches on the steepest hill.

Carriage Man Makes Prediction.

Although rather late in the day, carriage manufacturers are beginning to awaken to the fact that the automobile, being a carriage, has some interest for them, too.

"Within a short time nearly every carriage manufacturer will devote part of his factory to making automobiles," J. W. Pulford, manager of the automobile department of the Broc Carriage and Wagon Company, of Cleveland, is quoted as saying.

"In France," continued Mr. Pulford, "the majority of the automobiles are manufactured by carriage builders, and in the East the change is gradually coming about. The body, painting and trimming of a machine has to be done by carriage builders, and the engine is practically the only part that most automobile manufacturers turn out. They are obliged to buy the body from a carriage company, and in that way they become a middleman. The big carriage companies are beginning to realize this fact and are preparing to make engines and turn out the complete machine. The cost will be considerably lessened and the construction will be more rapid, in my opinion."

Partridge's Palatial Garage.

Novel features are possessed by a garage which is being erected for George H. Partridge, a Minneapolis (Minn.) dealer. The main building is circular in shape, covering a diameter of sixty-two feet. This will be

used as the storage room, the cars standing on marble slabs and having at the rear of each ducts connected with pipes carrying an electric current, gasoline and compressed air. A twelve-foot turntable occupies the centre of the big room, which is to be finished in white and ornamental colored tiling.

Radiators hang over every machine, and, to insure absolute dryness of the atmosphere in the room, a draught pipe laid under the floor leads to a chimney.

At one side a wing branches off, in which the washing room for the machines will be situated. At the other side the garage is connected by a two story wing to the residence, through which entrance is possible. In this wing will be the repair room on the first floor and quarters for the attaches of the garage on the second.

The whole structure is built of gray pressed brick, and everything going into its construction suggests at once ornamentation and substantiality.

Fargo Charges Two With Fraud.

Charging fraud against Attorney A. C. Mayo, No. 175 Dearborn street, and Louis A. Bryan, an automobile manufacturer at No. 159 Canal street, Chicago, Ill., John J. Fargo, of Los Angeles, Cal., has sued for an injunction in the Circuit Court of the former city to restrain the disposal of 16,680 shares in the Centre Drive Automobile Co., which, he asserts, Bryan obtained under false representations.

Western Car Gets Into New York.

Homan & Schultz, of this city, have added to their line the Marion car, made by the Marion Motor Car Co., of Marion, Ind. A sample is being shown at their store on Thirty-eighth street. It is a four-cylinder air-cooled, with sliding gear transmission and side chains, and lists at \$1,650.

WHEN PISTON RINGS BREAK

How Breakage May be Detected and How Best to Repair the Damage.

When an engine which has been running satisfactorily for some time fails to take certain hills with its wonted vigor, or when it becomes necessary to drop to a lower speed to climb it, it is indicative of loss of power.

Sometimes this is caused by faulty ignition; the plug is sooted over and causes short circuits. Sometimes it is the valve which requires grinding in. If, however, the plugs are clean and the valve seatings bright and tight, and the spark is a "fat" one, the loss of power may be due to a loss of compression caused by worn piston rings.

To discover if the motor is suffering from worn piston rings it is necessary to remove the lower half of the crank case. If the motor has more than one cylinder, the plugs should be removed in turn and the starting handle turned to test compression, one cylinder being left intact. The piston which is easiest to turn over the compression should be tested first for worn rings. This is done by removing the plug in the cylinder head, pouring a quantity of oil on the top of the piston, screwing down the plug, and, while one man turns the starting handle over the compression, the other listens beneath the crank chamber. If the piston rings are worn, the oil will be heard hissing and bubbling as it is blown past the rings.

Unless the rings are very bad it is sufficient to replace the one furthest from the crank, but it is as well when the piston is out to put in two new ones. It is often possible to see by the dirty state of portions of the piston ring where it has not been in contact with the cylinder walls.

Before putting in fresh rings all the burnt oil and carbon deposit must be cleared out of the grooves in the piston.

Piston rings are very springy and brittle and will snap unless great care is exercised in putting them on or taking them off. To take them off, start with the one nearest the connecting rod and draw it off over its own end, then open out the next one and draw it off in the opposite direction over the other two rings, then the next drawing it over the last. In this way the ring is not drawn over an empty groove into which it can slip. In replacing them proceed in the same manner, springing the first ring into the first groove and slipping the others over it.

Another good way is to obtain three short pieces of very thin spring steel—old clock spring is excellent for the purpose—slip them under the rings at equal distances from each other on the circumference of the piston, and with care the rings can be easily slid off along the steels. They can be replaced in the same way, with the minimum danger of breaking.

To put the piston back into the cylinder is not an easy matter when the new rings are fitted. An excellent way is to tie a piece of

thin, strong string tightly round each ring with a slip knot, compressing it until the joint is closed. The piston can then be wriggled into the cylinder, and as each ring goes in, the string is pushed off and can be cut with a knife and removed.

If this method is not adopted and the cylinder is a perfectly parallel tube it is almost impossible to keep each ring compressed while pushing the piston home.

The Evil of Emery Paper.

One of those indispensable articles which the average motorist carries with him and places in the same category as bits of wire, insulating tape, etc., is emery paper. He uses it frequently, all unconscious of the fact that he is committing a grave fault; for emery is something that, according to practical electricians, should never be used on wires, terminals or anything appertaining to the ignition system. Said one of the cleverest men in the electrical business to a Motor World man recently:

"Don't use emery paper; substitute sand-paper for it and you will have no trouble; and it will serve every purpose quite as well. I never let a piece of emery paper come into my shop if I can help it. My men have strict injunctions not to use it in their work. Why? Because, owing to the metallic properties of the emery, the paper is a prolific cause of short circuits. The small particles of emery sometimes lodge just where they can do the most harm, and as no one ever thinks of suspecting emery, the closest inspection reveals nothing wrong.

"Sand paper, on the contrary, is harmless and perfectly safe. Sand has no metallic properties, and, being a non-conductor, cannot close a circuit, no matter where the particles lodge. I am firmly convinced that many seemingly inexplicable short circuits are attributable to the use of emery paper."

The Work Springs Perform.

Motorists sometimes wonder why automobile springs break or give trouble in other ways. If one will but watch a car with front seat and tonneau well filled bowling along at a twenty-mile an hour or so gait, however, the wonder will be lessened. The rapidity with which these springs have to yield to the pressure put upon them and spring up and down is something marvellous. One sometimes wonders which is the worse—the shock or the recoil; each is great and a most severe test of the quality of the springs. By comparison, the springs on a horse drawn carriage have little work to do. The pace is so much slower and the load carried so much lighter.

The development of the carburetter has to a large extent obviated the asphyxiating fumes which a few years ago made it extremely undesirable to follow too closely in the rear of a big car. Bad carburation means an objectionable exhaust—and it is interesting to note the difference in odor between the exhaust of an air cooled and a water cooled engine.

FAVORS EXTERNAL BRAKES

And Advances Some Sound Arguments to Support his Favoritism—The Ideal Brake.

"One of the things which I should like to know is, What is really the advantage of internal brakes?" asks a motorist who makes a hobby of his cars.

"I have had a long experience with the ordinary external band brakes and with brakes of the expanding or internal type. Of course, none are perfect; one cannot expect any mechanism to be so, but I must say that I have found the exterior arrangement better. One can see at a glance what is the matter with it, and when it wants adjustment it can have it. One does not do it blindly, or have to take the car out for a trial run before one can tell whether the correct adjustment has been given. What, however, is more to the point, one can see at a glance if the ordinary adjustment has come to the end of its beneficial movement. With the hidden toggles and other arrangements which expand internal brakes it is quite easy to go on adjusting after a certain amount of wear has taken place without doing any good at all, as what is wanted is not adjustment—at any rate, not such adjustment as can be effected by taking up the brake rod; something must be done inside, and this is generally rather a tedious job. I admit at once that the internal brake looks smarter.

"This refers to side brakes, but I am absolutely at a loss to understand why countershaft brakes should be internal. At the best the countershaft brake is in a most inaccessible position, but why on earth it should be put so that it is absolutely ungetable except by taking out the speed gear box or dropping the propeller shaft I cannot for the life of me understand. What is more, I do not understand why there should ever be any trouble with the pedal brakes except that necessitated by the renewal at very long periods of the brake shoes.

"The ideal brake is found on the railway locomotive—the cast iron block on the steel tire. Why should we not have its equivalent on the motor car—at any rate, so far as the countershaft brake is concerned—as there is no difficulty whatever in providing the same double grip? I am glad to see that some cars—it is true they are in the minority—have practically arrived at this practice; but there are others—and excellent machines, too, in most respects—which are by no means so satisfactory as they should be when it comes to the question of brakes. The brakes are all right when they are adjusted, but they require almost daily attention to keep them just right."

Two Oldsmobiles were recently purchased for the use of the members of the Italian royal family—another example of how American made machines are competing with those of European manufacture on their own grounds.

CAUSES OF VARNISH CHIPPING

Unseasoned Wood and Undried Paints are Factors—Dark Colors Give Most Trouble.

The Boss Painter was critically examining the finish on a phaeton body, from which the varnish had chipped in places, when the Liveryman and the Carriage Builder entered, says the Carriage Monthly.

"Apparently the troubles of the painter, like the performance at the summer theatre, are continuous," remarked the Liveryman as he drew an empty nail keg into convenient position and sat down. "Now, there is a job which, to my personal knowledge, has not been out of the builder's factory to exceed two months, and you find the varnish chipping badly."

"Perhaps if we could get the carriage builder to season his lumber better," replied the Boss Painter, with insinuating emphasis. "we should have fewer newly painted and finished surfaces chipping and flaking off."

"It is not so much a matter of unseasoned lumber," responded the Carriage Builder, with just a suggestion of suppressed warmth in his voice, "as it is a necessity for more thorough drying of the coats of paint and varnish."

To which the Liveryman diplomatically added: "Undoubtedly both parties are blameworthy in this matter. The point is pretty generally conceded, I think, that if the drying of lumber could be carried on under more natural conditions, and given time to season thoroughly, as formerly, and the paint and varnish allowed to dry through, as it used to be allowed to do when I was a boy turning the paint mill and making the boss rich, there would be a good deal less of varnish chipping and flaking."

"In all fairness," admitted the Boss Painter, grinding a chip of the varnish film under the point of his knife and studying the powder intently, "the cause of the trouble originates in both the wood shop and the paint shop, and the two departments have the impatient and overexacting public back of them as the original and prime mover in the drift away from safe and sane methods of drying both the wood and the paint and varnish. You hear it asserted that the cheap varnish on the farm wagon cannot be hammered off, which, after all, is not a difficult proposition to explain. On the farm wagon there is comparatively little paint under the varnish, and this meagre paint skin is dry before the varnish is applied. The cheap varnish dries too hard to chip or flake off. It is short lived, and soon loses its gloss, but while it survives it holds intact. Its gloss once gone, it begins to crumble away and flies off like pulverized rosin. Thus endeth the history of the cheap farm wagon varnish that doesn't chip."

"You think then," interrogated the Liveryman, "that in case of the cheap varnish on

the farm wagon, over a thin glaze of paint, the strain is from the outside chiefly?"

"Yes, the strain is practically all from the outside," answered the Boss Painter.

"Why should the heavier foundation, made up of more coats of paint on the carriage, impose greater strain upon the varnish than the thin foundation on the farm wagon?" questioned the Carriage Builder.

To which the Boss Painter replied: "It shouldn't, and, in fact, would not, provided the foundation was thoroughly dry and coated up uniformly. If the coats of pigment are not applied with a strict uniformity of depth, and are not permitted adequate time to dry and season out thoroughly, such a foundation will be enormously porous and possess unusual powers of absorption, in which case the oil of the varnish is sucked into the porous paint structure. The varnish gum, being thus deprived of its life giving resources, chips and flakes off."

"I fail to see how unseasoned wood could produce the effect mentioned," suggested the Carriage Builder.

"Unseasoned wood," remarked the Liveryman, "must eventually discharge its moisture, and if the inside of the panels are painted and finished, the moisture will be expelled from both sides of the wood, with the result that the dampness gradually works through the successive coats of pigment outward, causing the surface of varnish to break up and, under the strain of reaction, to chip and flake off."

"But wouldn't this cause the paint to chip off also?" asked the Carriage Builder.

"Not unless the paint had some inherent weakness, due to improper mixing, etc., or a weakness due to excessive sandpapering over sharp edges of the surface," explained the Boss Painter.

"Why, then, should the paint peel clean to the wood, as it does sometimes when exposure to the rays of the sun occurs?" persisted the Carriage Builder.

"Because the conditions are entirely different," rejoined the Boss Painter. "The intensity of the heat is concentrated upon a portion of the surface until the expansion of the paint and color ensues, and this in turn causes expansion of the recently applied varnish into eruptions, which we call blisters. Where the chipping of the varnish takes place, the expulsion of the moisture has been a comparatively gradual process, and it may occur after the varnish has hardened sufficiently to resist the action of the sun's heat."

"Possibly I may be wrong," interposed the Liveryman, "but my observations lead me to suspect that chipping of the finished surface occurs oftener upon the very dark colors, like black, dark greens and blues, than upon light colors."

"This agrees with my conclusions," responded the Boss Painter. "Jobs coming to the paint shop with the surface chipped are nearly always painted dark colors. The base of such colors is naturally brittle, and when ground in Japan the brittle, flaky nature is increased and quickly acted upon by the causes just mentioned."

PARCELS DELIVERED BY AUTOS

New Toledo Concern Inaugurates a Novel System, in Which Books of Stamps Figure.

There are some novel features planned to be carried into effect by the Toledo Fire, Police Notification and Parcel Delivery Co., the incorporation of which with a capital of \$25,000 is noted elsewhere. The concern's principal business will be that suggested by the latter portion of its lengthy title, viz., the carriage of parcels. Automobiles will be employed in the delivery service, the Cadillac having been selected as the type of car to be used. It is expected that by January 1 twenty of these machines will be in service.

The company is located in the Chandelier Building, where they have floor space for the handling of an immense number of parcels at one time. The system is to place in the hands of the merchant a book containing a certain number of stamps at a fixed price for parcels of certain size and weight. When the parcels are ready for delivery by the merchant, he simply tears out a stamp and places it on the parcel, and is then ready to turn it over to the company for delivery, and as soon as it is turned over the merchant is relieved of all further responsibility in the matter for its quick and safe transmission to the purchaser. In addition to the delivery of parcels, money will be collected when necessary for same, which money will be taken care of by the company, thus relieving the merchant of all worry of having his money in the hands of irresponsible boys and drivers.

The company will also have a thoroughly equipped "messenger service," which can be used day and night by the holders of the company's stamp books. By putting the stamp on any letter, note, package, late lunch, etc., it will immediately insure its prompt delivery to any part of the city.

Newark Store's Successful Trial With Cadillacs.

One of the big Newark, N. J., drygoods concerns, W. V. Snyder & Co., have for the last three months been experimenting with a Cadillac delivery wagon. The car has accomplished wonders, acquitting itself far beyond expectations. It has travelled over one thousand miles, and is at present engaged in covering the ground that it required four and five wagons of one of Snyder's competitors, another large drygoods store in Newark, to cover.

Other large stores in Newark have watched the experiment with interest, and will shortly follow the Snyder example, as they have but waited for the successful outcome of the venture before placing their orders for similar wagons.

The Seamless Steel Tubes Co., of Detroit, Mich., has been reorganized as the Detroit Seamless Steel Tubes Co., and is preparing to considerably enlarge its plant.

Where the Same Highway Serves Both Boat and Automobile.



SCENE ON THE DUSTLESS, WATER-COOLED ROAD NEAR SODUS POINT, N. Y., DURING A RECENT TOUR OF MR. AND MRS. J. N. WILLYS AND MR. AND MRS. R. D. WEBSTER, OF ELMIRA, N. Y.

How to Share the Joys of Automobiling Free of Expense.

The type of automobilist who "hasn't any car just yet" is becoming more and more general, and the custom of "going out with friends" is exceedingly popular, says a writer in *Le Velo*. In the first place, it has the advantage of doing away with certain expenses, such as the price of a car, the cost of its upkeep and the wages of a chauffeur. The economies realized in this way allow of a more liberal expenditure in other directions, such as the purchase of motor cap, goggles and gloves. These, which should be the best obtainable, form the complete equipment of the motoring guest.

Wraps should be provided by the owner of the car, and it would be bad taste on our part to bring any, for by doing so we would appear to throw doubt on the forethought and hospitality of our host.

Luncheons, dinners and, generally speaking, all substantial repasts, are also to be left to the proprietor of the vehicle; at least this is the opinion of several guests of my acquaintance whom I have consulted on this point. On the other hand, they think that

the guest should pay for the lighter refreshments, such as cigarettes, liquors and coffee, if these are not already included in the proprietor's bill. The guest may also buy picture postcards and should distribute them among the entire party.

It is customary for the guest to display appreciation of the condition of the engine and the speed of the car. The statement, "We are making thirty-five miles an hour," should always elicit the reply, "At least." It is incorrect at such a moment to take out your watch, it being well known that watches are utterly unreliable for estimating the speed of automobiles, since they always indicate a more moderate pace than that at which the vehicle is actually travelling.

If the owner should inquire in a tone of well feigned indifference, "Do you think I drive well?" answer, "Yes; but you have one fault—you are too daring." And you should say this even if he jams on both brakes every time he sees a chicken.

If another car passes you say, "It is idiotic to race like that on the public road."

We advise guests to deny all knowledge of how repairs are effected, especially repairs to the tires.

There are many recommendations which it is unnecessary to give, since they will naturally suggest themselves to the reader. For instance, when talking afterward about a certain trip, when you left Dublin at twenty to 3 and reached Maryborough at half past 5, very possibly the fractions will be forgotten and you will remember leaving Dublin at 3 and arriving at Maryborough at 5 o'clock.

Similarly, the duration of a stoppage will vary according to circumstances. The same repair that only took ten minutes when the proprietor's mechanical skill was in question, may have taken three-quarters of an hour if it is necessary to account for time spent on the road.

It is by following these suggestions and such others as instinct will dictate that the motoring guest will succeed in prolonging his career as a guest, and will be able to postpone buying a car himself until manufacturers have adopted that "fixed type" which he has already been for many years expecting.

Motors Must Now Stop in Milwaukee.

Several peculiar features are contained in the new Milwaukee, Wis., automobile ordinance, which became a law last week after a long discussion. Two clauses, one sensible, the other nonsensical, are particularly noticeable. The first fixes the maximum speed at twelve miles an hour in a direct course, and four miles an hour when turning. The second clause requires the engine to be stopped whenever the car is stopped. The ordinance provides as follows:

A fee of \$1 from all owners of automobiles for a registration certificate containing the owner's name, address and number. The owner must equip his machine at his own expense with his number. The letters must be of white metal and four inches high placed on a dark background, and must be followed with the letter M, also on a dark background, and of white metal, this letter designating Milwaukee. The number is placed on the back of the machine. All machines must be equipped with an alarm bell or horn, and must also have a brake or set of brakes capable of bringing the machine to stop within ten feet when travelling at the rate of ten miles an hour.

At any time after dark or before dawn the machine must have a lantern or light, showing a white light from the front and red from the rear.

No certificate will be issued to any one under eighteen, and to no one not having the use of both arms.

The speed limit is placed at twelve miles an hour on a direct course and four miles turning corners.

No part of the automobile must be allowed to remain running while the machine is standing.

For violating the ordinance the minimum fine is \$1 and the maximum is \$50. The same ordinance applies to motorcycles, only their letters are to be but two inches high.

Why the Mayor is Perplexed.

The automobile ordinance which Kansas City's Mayor signed a week ago, is puzzling the latter, who is at a loss to know whom to appoint as examiners, of whom there must be three, one of them the superintendent of streets. They are to be "expert automobile operators," in the words of the ordinance.

The board of examiners is to examine all drivers of automobiles and issue licenses to those who are found proficient. Operators must have a license which costs \$1 a year. The job of examiner is without pay.

Hist! Marklesville Detectives are Astir.

Twenty-seven Indiana farmers have filed articles of incorporation of the Marklesville Detective Association and received commissions from the county auditor.

It is indicated in the articles of incorporation that the prime purpose of the organization is to prevent lawlessness, but it is believed to be aimed at automobilists who do not give room on the road and who do not respect speed regulations.

Scotch Tweeds for Fall Wear.

With the coming of autumn, the time has come for the retirement of the linen and tan silk coats so generally affected by womankind during the summer months. The styles for fall wear are now making their appearance both here and abroad, and there is every promise that Scotch tweeds will be in very considerable vogue. A London coat of smart appearance is that shown by the accompanying illustration. It is of almost full length, made of brown, white and green check Scotch tweed, strapped and trimmed with brown leather and having buttons to correspond. The back is rather full and gath-



ered in at the waist, from which it falls in ample folds to the edge; while down the front the long revers are made to wrap across in double-breasted fashion, or, if preferred, may be worn turned back and buttoned down, which gives the appearance of pleated fronts.

There is also another coat exactly similar in style to this one, the only difference being in the coloring, which consisted of a red, black and white tweed with trimmings and straps of red leather.

Seven Physicians in Houston's Club.

Seven physicians and one woman were among the twenty motorists who organized the Houston Automobile Club at Houston, Tex., last week. Dr. W. R. Eckhardt presided and Miss Pennie Bering acted as secretary. A committee on constitution and by-laws was appointed, with instructions to report at the next meeting, at which officers will be elected.

Goodbye to the Flowing Veil.

Long flowing veils for fair motorists will soon be a thing of the past if the mandate issued by the National Milliners' Association carries the weight it should. The association recently met at Chicago and resolved that streaming yards of veiling were passe. Small and close-fitting veils will receive the milliners' undivided support.

"No veil is suited for use on an automobile trip which leaves any loose ends to wave in the wind," said Mme. Hunt, president of the association. "They should rather be round and neat, clinging close to the outline of the head and face. As for the automobile hat itself, the latest fad is a round turban effect, made of material like the coat, of light weight, and in soft folds, ornamented on one side with some light decoration, such as an owl's head, a breast of feathers or a tuft of fur. The hat should be strictly a utility turban for rough wear."

Dupont Heads Wilmington Club.

The temporary organization effected a few weeks ago by the motorists of Wilmington, Del., was made permanent last week. Edgar M. Hoopes called the meeting to order, and Leonard E. Wales acted as temporary secretary. The membership roll was signed by thirty-six persons, after which the following officers were elected:

President, Pierre S. Dupont; vice-president, William G. Mendinhal; secretary and treasurer, Willard C. Jackson; executive committee, Edgar M. Hoopes, William C. Spruance, Jr., Dr. Samuel G. Rumford, Joseph Bancroft, H. T. Gause, Dr. J. Paul Lukens, Francis G. Dupont, Alfred R. Jones and John H. Evans.

To Make the Motor Exhaust Perfume.

Motorists who dislike the odor of the exhaust, which is not the sweetest imaginable even when the combustion is perfect, may get rid of it by using Petsen. It is only necessary to add some Petsen to your gasoline, and instead of pulling wry faces and ejaculating expressions of disgust, other road users will open their chests to inhale the aroma your car will leave behind. The only drawback to the picture is the price of Petsen, which is \$6.25 a gallon.

How a Methodical Motorist Proceeds.

One methodical motorist has in his car-house a list of all the oil holes and cups on his car, and before setting out on a journey he casts his eye down this list to make sure he has forgotten nothing. It is very rare for him to have roadside troubles, as he follows out the excellent maxim of giving attention to all parts of his car before the mechanism screams for oil.

After paying his fine for alleged scorching on the Lancaster Pike, near Philadelphia, Michael Ehret made some pointed remarks to Magistrate Brook. He said that it was about time for the police to attempt to stop speeding on the part of the horsemen of the vicinity instead of confining their attention to automobilists.

Motor Cars and Rural Delivery.

While the rural free delivery may be considered as a well established feature of our postal system, it is likely to undergo considerable changes in the future, ventures "The Boston Transcript." In New-Hampshire one of the rural agents, who has a route twenty-five miles long, from Nashua, uses a gasoline runabout, and goes over his route in about two hours. People in his territory receive the morning papers from the cities before noon, and before any of the other carriers, who start out on other routes of the same length, have reached their turning point. This leaves the rural carrier free for the afternoon to engage in other business, and adds considerably to the profit of his service. If this carrier finds the automobile as cheap as the horse, and considerably more serviceable, it is probably only a question of a short time when other carriers will find it to their advantage to adopt the same means of locomotion. The general adoption of a means of rapid transit in delivering the mails would be of immense value to the public served, and while the employment of a vehicle is left to the carrier, the government is naturally anxious to see the patrons of the rural free delivery get the best service possible, and the postal authorities probably will encourage the automobile free delivery. It is believed that the horseless carriage will be the vehicle of the rural mail carrier of the future, and that a vast improvement in the service will be effected. If along with this comes the parcels post, the farmer who is served by the rural free delivery will be correspondingly bettered, and the isolation of the farm will have vanished forever.

Will Fight Against Exclusion.

Backbone appears to be possessed in plenty by a committee of three members of the Springfield (Ill.) Automobile Club who were appointed to wait on the Park Board and protest against the exclusion of automobiles from Washington Park. They declared bluntly that unless the order is rescinded legal proceedings will be instituted against the board.

The Park Board informed the committee that it will forward its decision in the matter to the committee. The committee notified the board that as soon as the communication is received a special meeting of the club will be held to take action in the matter.

The automobile club committee was composed of Burke Vancell, president of the club; Ralph Baker and Guy R. Mathis. Mr. Vancell acted as spokesman, and he said that it seemed to the club that it was not the duty of the board to bar the automobilists from the park and deprive them and their families of the pleasures of the park.

He said that the club deemed it the board's duty to regulate the speed and other conditions that might apply to danger.

Mr. Baker said that the proposition seemed to him as, "You pay taxes and then keep out of the park."

END OF THE SEASON "AUTOMOBILE FACES."



Combined effects of a season in the sun and the several styles of goggles and masks in vogue.

Successful Military Experiments.

Highly successful experiments with motor cars for military purposes were made recently in Italy. They were conducted under the auspices of the Automobile Club of Italy and organized under the patronage of the King and the military authorities.

The centre chosen for the start was Brescia, and about fifty cars participated in the scheme. The mobilization was conducted on the same lines as for horses belonging to private owners which are scheduled for military purposes, the War Department having the right to claim them for use in the event of war. At 4 a. m. each driver had to proceed to some designated point, and upon arrival was to open a sealed letter containing the orders for his journey. It was assumed that an enemy was endeavoring to enter Italy by thirteen different routes on the east, west and north frontiers. Some of the points to be reached by the cars were difficult of access, steep heights having to be overcome. Twenty-four hours were allowed for the journey out and back. Each car carried an officer, and an enormous interest in the tests was exhibited by the public. A gold medal was offered personally by the King to the club which sent the largest contingent of cars, while a number of other prizes were presented.

The longest run for the day was 540 kilometres, and the whole of the cars which started, except one, which fouled a telegraph post, accomplished their task to the satisfaction of the authorities. On subsequent days other military work was undertaken, including conveyance of wounded, etc.

Baltimore to St. Louis and Back.

Four Baltimoreans returned last week from an automobile trip to St. Louis and return. They are Rudolph Lipps, his brother, Christopher Lipps; his nephew, C. R. Watten-scheidt, and Frederick C. Black.

The party left Baltimore on August 17 in a 24 horsepower gasoline touring car, and reached St. Louis ten days later. Mr. Lipps originally intended to make the tour with the American Automobile Association, which made its annual run to St. Louis in July, but his new car did not arrive in time.

The trip was enjoyed immensely by the tourists, who did not suffer a mishap. They travelled about eleven hours each day, and made a distance averaging about 125 miles a day. The roads were found to be in very good condition, especially in Indiana. While making the journey the party secured meals and lodging at different inns and hotels on the route. The party remained in St. Louis five days, and then began the homeward journey.

Mr. and Mrs. Fletcher L. Barrows, of Middleboro, Mass., are on the passenger list of the Kaiser Wilhelm II, of the North German Lloyd Steamship Co., which sailed last week for Europe. They will make an extensive tour through Switzerland and Italy in their new French touring car, which awaits them in Paris.

MOTORING IN THE TROPICS

Unusual Conditions and Regulations That are Encountered—Java as an Example.

No one who gives the subject any thought can escape the conviction that there is a great future for the automobile in many tropical countries. In the ruder and wilder sections, of course, the lack of practical roads will always militate against the motor vehicle. But in some of the older and higher seats of civilization, as is well known, splendid highways abound, they will ultimately be traversed by multitudes of self-propelled vehicles, whose immeasurable superiority to the horse drawn kind is universally acknowledged.

One of the countries which is almost certain to prove a good field for the cheaper and lighter class of cars is Java. Although not generally known, that neighbor of the Philippine group even now boasts of a respectable number of cars, which are doing good service. A German traveller, Herr Max Wenkel, who has spent nearly three years on the island, has made a study of the subject, and both his conclusions and his information are of interest.

The conditions of automobile use in the tropics are entirely different from those in temperate climes, and a car built for American or European conditions can hardly be used in the tropics without radical modifications. The first thing that has to be reckoned with is the hot and moist climate; other factors are the peculiar taste of the public, the road conditions and the fuel obtainable. As concerns the latter, it should be mentioned that gasoline is produced in Java, but the product is very impure and of varying density; it is entirely unsuitable for spray carburettors, and only surface carburettors can therefore be used in the Dutch East Indies. No particular pains need be taken to secure high fuel economy, as the gasoline is very cheap.

The pneumatic tires must be of especially good quality to withstand the climate of the tropics. No European wood must be used in the body construction, as it would soon be destroyed by the various sorts of insects, among which the white ants may be mentioned. The lacquering usual on European motor cars is destroyed in a short time by the climate. It is self-apparent that a motor car for the tropics should be provided with protection against the sun's rays. If the vehicle is intended for long trips into the country several other conditions must be observed. In the first place, the tread must not be wider than fifty inches, for in some places very narrow roads and suspension bridges must be passed which do not admit of a wider vehicle. This applies particularly to Sumatra. The weight of the vehicle, too, should not exceed five cwt. (560 pounds).

Many small brooks are only bridged with bamboo mats, and many larger rivers must be crossed on bamboo floats, which would sink if the car were heavier than the weight above specified.

The vehicle must have plenty of storage room for touring necessities, such as a supply of imperishable food (preserves and mineral waters), mosquito netting, much clean linen, spare tires, etc. It is, of course, understood that the total supply of gasoline necessary for the whole trip must be carried along, or else gasoline supply stations established in advance. During the rainy season the roads, with the exception of a few military roads, are hardly passable. But during the dry season all the roads, especially in Java, are in very good condition for motor traffic. The streets in the larger cities, such as Batavia, Surabaya, Solo and Bandaeng, are excellent, as they are very wide and have a firm surface of cement or asphalt.

A large amount of red tape is connected with the obtaining of a driving permit. First of all, application must be made to the proper authorities representing the capital of the province in question, such as the Provinces of Batavia, Preanger or Solo. These provinces are mostly of such size that one may drive through them in a car in a few hours. At the frontier of the new province a new permit is required.

In the application must be stated the length, width and height of the car, as well as the number of seats, the weight of the vehicle and the horsepower of the motor. After some four or five months, but probably even later, one receives notice to have the car in readiness at a certain hour for an expert examination.

In Batavia, for instance, the official appointed by the government is the engineer of a steam crane company, who has no experience of motor cars or of the explosion motor. The expert, after having walked around the car a few times and posed some very cautious questions, declares the machine to be admissible to public road traffic. But the happy owner is still far from being allowed to drive. The examining official first reports to the authorities that the machine is in good condition. After several months have passed another official appears on the scene to determine the driving skill of the owner. If this examination turns out to the satisfaction of the exalted authorities, another several weeks pass, when finally the driving permit is delivered. However, the owner is still unable to drive, as the authorities have first to make an identification sign of the size of an oven door, which contains in large black letters the name of the province—Meesterkornelis, for instance—and below that the registration number. After having paid \$5 for the examination and an additional \$5 for stamps and clerical expenses, the right has been acquired to drive on the left hand side of the road at a speed of 7.2 miles an hour.

It is worthy of note that the automobile must be provided with a bell, as a warning

signal, while horse carriages, two wheeled carts, private carriages, trucks and delivery vans carry horns. In the larger cities, as nobody walks but everybody rides, there is an enormous vehicle traffic, and consequently an uninterrupted ear rending concert of noises. In other cities of the same province the regulations are different. In one city, for instance, an automobile owner, upon making application for a driving permit, was asked to present one front wheel and one rear wheel for examination. After a few days the wheels were returned to him with the remark that everything was in order. In Sumatra the authorities simply appointed a road inspector to the post of automobile examiner. Recently, however, the regulations in Java have become much more lenient, a motorist having been given a driving permit free of charge after a short examination as to his skill in driving and without examination of the vehicle.

To Encourage Mountain Climbing.

Mountain climbing is being further encouraged by a competition that has just been inaugurated by a society at Grenoble, whose object is to popularize touring in the Alps. In this competition the drivers have to follow a given route, which takes in the whole of the Alpine range in the Dauphiné and the Savoie, and they have to try to cover each section at a speed of twenty-five kilometres an hour, the time being taken by hotel keepers at the beginning and end of each section. The time will, moreover, be taken with a chronometer, which will be intrusted to each competitor, and it will be sealed in a case so that it would be impossible to tamper with it. There is no time allotted for covering the different sections of this mountain climb, and it can be undertaken at any period between now and the end of July, 1905. The winner of the test—that is to say, the owner of a car who covers all the different mountain sections at a speed of twenty-five kilometres an hour, or who gets nearest to that figure, will receive a cup known as the Coupe des Alpes Françaises.

Crossed Wires that Caused Trouble.

On starting up a four cylinder car the other day a motorist almost broke his arm on account of premature ignition. As the ignition lever was in the correct position and the primary wires leading to the contact breaker were correctly fixed, he was at a loss to account for the accident. A careful examination of the electrical system, however, revealed a short circuit between two of the primary wires. These were all tied together, and were held in position by brackets, which had been screwed up too tightly. The result was a breakage of the insulation, and two of the primary wires were touching. Immediately the circuit was completed on one wire by the contact maker, it carried the current to the second wire. The result was that two cylinders fired simultaneously, one, of course, prematurely.

The Week's Patents.

769,582. Water Cooling System for Explosion Motors. Herbert Austin, Erdington, near Birmingham, England. Filed Aug. 6, 1902. Serial No. 118,616. (No model.)

Claim.—1. In means for the purpose specified, the combination with the cylinder and valve chest jackets of an internal combustion engine, of a plurality of main cooling pipes connected in a superposed system, one end of said system of pipes being connected with the outlet of the cylinder jacket, thereby receiving the full flow from the jacket, and the other end of said system of pipes being connected with the inlets of both the cylinder jacket and valve chest jacket, a supplementary system of cooling pipes between and connecting the outlet of the valve chest jacket with the inflow to the main system of cooling pipes, and means for effecting the circulation of water through said jackets and system of cooling pipes.

769,589. Gas or Other Internal Combustion Engine. Dugald Clerk, Ewhurst, England. Filed May 14, 1904. Serial No. 208,035. (No model.)

Claim.—In an internal combustion engine the combination with the cylinder and means for supplying a combustible mixture thereto, of means for supplying steam under pressure to said cylinder during the compression stroke of the piston, substantially as described.

769,611. Monorail or Like Railway or Tramway. Céleste Joly, London, England. Filed Feb. 6, 1903. Serial No. 142,124. (No model.)

Claim.—In a motor car, a vehicle, a rail on which the vehicle travels, a frame connected to the vehicle and extending to one side thereof, a motor car embraced by the frame and flexible couplings connecting the frame and motor car.

769,666. Tire. Alfred Papleux, Lyons, France. Filed May 8, 1903. Renewed Aug. 8, 1904. Serial No. 219,811. (No model.)

Claim.—In a tire the combination of a wheel rim comprising a base and two parallel guiding walls, a rigid annular U-shaped tire having its limbs guided between said walls, a resilient cushion within the chamber formed by said rim and tire and a guard plate for preventing the nipping of said cushion between the sliding surfaces of parts.

769,734. Chain Adjustment for Motor Vehicles. Henry Ford, Detroit, Mich. Filed June 22, 1904. Serial No. 213,582. (No model.)

Claim.—1. In a chain adjustment for motor vehicles, the combination with a spring perch, a clip plate adjustably secured to said perch and to which the vehicle spring is adapted to be secured, and means on said plate for the attachment of a radius rod.

769,840. Transmission Gearing for Motor Vehicles. Charles Schmidt, Warren, Ohio, assignor to Packard Motor Car Company, Warren, Ohio, a Corporation of West Virginia. Filed November 20, 1902. Serial No. 132,113. (No model.)

Claim.—1. In a transmission gearing for motor vehicles, the combination with a motor shaft, the driven shaft, and the gears of different sizes mounted thereon, of a hand-lever for throwing said gears into and out of mesh, a backing gear, and means for operating said backing gear by a side movement of said hand lever to throw it into and out of operation.

769,971. Drive Chain. Clarence E. Whit-

ney, Hartford, Conn. Filed March 5, 1904. Serial No. 19,640. (No model.)

Claim.—A drive chain comprising pair of links having holes of irregular contour through their opposite ends; bushings to unite said links, the ends of said bushings fitting tightly in said irregular holes flush with the sides of the links, constituting with the latter a rectangular chain element of rigidly united parts; round pins to extend through and beyond said bushing, rotatable in the latter, the ends of said pins extending from the bushing outward being flattened on the same side; other links to fit over the flattened ends of the pins to constitute another rectangular chain element, one of each pair of the last named links being immovably secured on the pin at one end thereof, the other link being removably secured on the opposite end, and cotter pins to extend through one end of said round pins at right angles to the flattened side thereof to secure said removable links in position.

769,975. Storage Battery. James P. Wood, Buffalo, N. Y. Filed March 14, 1904. Serial No. 198,088. (No model.)

Claim.—1. In a storage battery, a series of spaced positive plates and a series of spaced negative plates, the two series of plates being separately suspended in alternation within the cell, each plate of the two series being held in central suspension.

770,080. Device for Protecting Pneumatic Tires. Emile Lapisse, Elbeuf, France. Filed December 23, 1903. Serial No. 186,316. (No model.)

Claim.—1. A protecting device for pneumatic tires, comprising a strip of wire gauze, a strip of canvas or other similar fabric onto which the wire gauze is fixed, and elastic strips fixed on the edges of the strip of canvas, the length of the said elastic strips, when free, being a little less than the length of the canvas strip.

770,101. Vehicle Brake. Lars G. Nilson, New York, N. Y., assignor of two-thirds to Siegfried M. Fischer and Harry S. Fischer, New York, N. Y. Filed April 15, 1903. Renewed June 30, 1904. Serial No. 214,727. (No model.)

Claim.—1. In a vehicle brake, a lever pivoted on the body, a pump connected with said lever, a reservoir supplying said pump, a brake cylinder, brake mechanism actuated thereby, a valve between the pump and the reservoir, a second valve between the pump and the brake cylinder, and a manually controlled valve between the brake cylinder and the reservoir, substantially as described.

770,139. Battery Plate Mold. Albert C. Wood and James A. McMullan, Philadelphia, Pa. Filed February 20, 1902. Serial No. 94,984. (No model.)

Claim.—1. A mold adapted for use in the casting of electrodes for secondary batteries, comprising a holder adapted to support a series of lead strips edgewise and substantially parallel with each other, the said holder having formed in its face a series of open ended grooves, and there being ar-

WANTS AND FOR SALE.

15 cents per line of seven words, cash with order.

In capitals, 25 cents per line.

DESIRABLE Touring Car for sale at bargain, or will give good trade for runabout. THE STARIN COMPANY, North Tonawanda, N. Y.

FOR SALE—Cadillac with full touring equipment; excellent condition. Price about half original cost. THE STARIN COMPANY, North Tonawanda, N. Y.

FOR SALE—At Low Prices: Standard 4 Cycle Motors; Single Cylinder, 3½ H. P.; Double Cylinder 8 and 12 H. P. for Automobiles. Same with bases for launches. N. B. HARRINGTON & CO., 106 Broadway, Buffalo, N. Y.

FOR SALE—Crest Model D with tonneau, nearly new, perfect condition, brand new tires; have larger car; price, \$675. Dr. C. E. COOK, New London, Iowa.

1903 FORD—Tonneau, equipped with canopy top, glass front, double tube tires. Perfect order, \$760. F. W. OSBORN, Secretary, Quincy Coal Company, Quincy, Ill.

FOR SALE—Factory 50 x 80, two stories with power, machinery and tools; all lit with electricity; good fire protection; lot 56 x 150; suitable for fine automobile or carriage plant; in fine town of 1,600; two railroads and one electric road; will sell for \$2,500; a snap for some one; owner going south for health. Address, Box 7, Oxford, Mich.

FOR SALE—1903 Merkel Motor Bicycle completely overhauled and now really better than new. N. Y. B., care MOTOR WORLD.

SEND stamp to C. A. Coey & Co., 53rd and Cottage Grove, Chicago, for the largest list of second-hand machines ever issued.

1904 Winton, with canopy top and side bas- kets; in use 60 days; good as new; price \$1,690. L. NEAL, Box 939, Oklahoma City, Okla.

18-20 MERCEDES car, best condition, completely equipped, belongs to Mr. Harlan W. Whipple, can be seen at Garage, 140 West 27th Street. Price, \$5,000.00.

WANTED—Automobile, Oct., 1900; back numbers Motor Vehicle Review, 1902; Motor Age, 1900; Motor Age, 1901. Write to MRS. C. F. MAC DERMOT, Hotel Touraine, Boston, Mass.

ONE Ford with Tonneau and Deck, looks like new, equipped with (1) \$50 search head light, (2) large brass side lights, (1) brass tail light, (1) large flexible tube horn. In best guaranteed condition. Complete, \$550.00. For sale on account of sudden death of owner. Write H. E. FOURCHER, Augusta, Georgia.

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This beautiful 14 kt. Gold Filled Charm, guaranteed for 10 years, sent to any address on receipt of \$1.50. Mounted as hat pin, \$2.00. Special discount to the trade.
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ranged adjacent to the opposite open ends of each of the said grooves channels through which the fluid metal flows whereby the strips are held securely and are caused to be intimately united at each end by fusion with the frame of the electrode, substantially as set forth.

770,140. Electrode for Batteries. Albert C. Wood and James A. McMullan, Philadelphia, Pa. Filed April 22, 1902. Serial No. 104,215. (No model.)

Claim 1. As a new article of manufacture the herein described strip for use in the manufacture of electrodes for secondary batteries formed with its end portions thickened and notched, the notches extending from the edges inward part way only through the said thickened portions, substantially as set forth.

Fouling Due to Over-Rich Mixtures.

The fault of all but the most skillful drivers is to use too rich a mixture. This is not only wasteful of gasoline, and therefore unnecessarily expensive, but it brings in its train a number of other evils. When the mixture is too rich proper combustion does not take place, and the unconsumed portion of the charge is expelled from the combustion chamber after fouling everything it comes in contact with—the spark plug, the valves, etc. When it finds its way into the open air it leaves behind a visible trail of vile-smelling fluid, which is slow of dissipation and productive of uncomplimentary remarks on the part of other users of the street or road.

It is always a good plan to gradually reduce the supply of gasoline admitted to the that the mixture is impoverished. Then the supply should be increased very slightly, and in this manner the happy mean can be struck, to the manifest improved running of the car.


Above all, the motorist should rid himself of the belief that a very rich mixture will result in better running. As already stated, exactly the opposite is the case. You are getting more heat and more fouling, but that is all. Air is as important a part of your mixture as gasoline; for without it the latter cannot be ignited, and it would accomplish very little if it could. It is always well to bear in mind, too, that too poor a mixture makes itself known at once, while if it is too rich you learn of the fact only when the harm, such as fouling, etc., has been done.

To Lessen Spring Breakage.

If the leaves of automobile or carriage springs are painted with Dixon's Silica-Graphite Paint or with a mixture of linseed oil and flake graphite, it is asserted that they will not only never squeak, but will ride much smoother and rarely break.

The flake graphite thoroughly coats and lubricates the metal, enabling the leaves to slide one or the other with ease as they are intended. This assures smoother riding qualities, freedom from squeak, protection from rust and wear, and reduces liability to breakage to the minimum point. Carriage builders, like the Studebakers, have for many years fully appreciated the value of Dixon's Flake Graphite for the protection of carriage springs, and made generous use of it.

The Incomparable White



King of the Belgians' body, long wheel base, large wheels, plenty of room, great luxury of upholstery and fittings, higher power and greater speed.

1905 Model

A touring car which runs noiselessly without odor, smoke or vibration; as simple to operate as an electric with a radius of operation as great as the higher-priced, high-powered gasoline machines.

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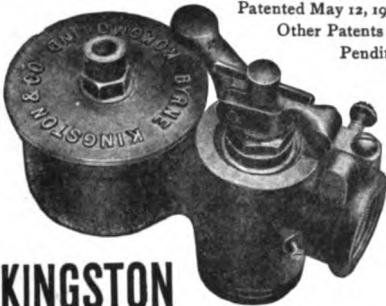
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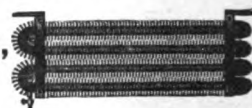
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In the absence of that important little article, a match, when out on a lonely road, the resourceful motorist does not despair. He knows that he can, at a pinch, obtain a light by disconnecting one of the high tension wires on his sparking plug and placing a piece of waste saturated with oil on the plug. On completing the circuit the spark will jump from the wire (which is held near the plug terminal) and fire the waste.

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For 1905.



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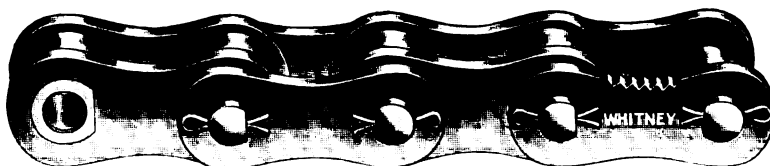
HARTFORD, - CONNECTICUT

“WHITNEY” CHAINS

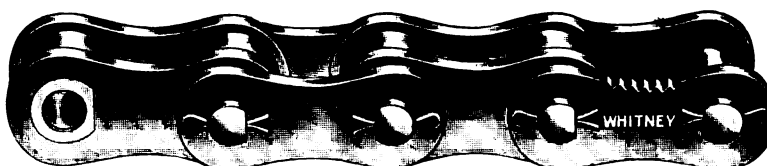
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Avoid using Cotter Pins a second time, as they are very inexpensive, and new pins are more reliable than old ones. Every time a Cotter Pin is opened and closed it is weakened and eventually it will break.

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THE MOTOR WORLD

Volume VIII
No. 2.

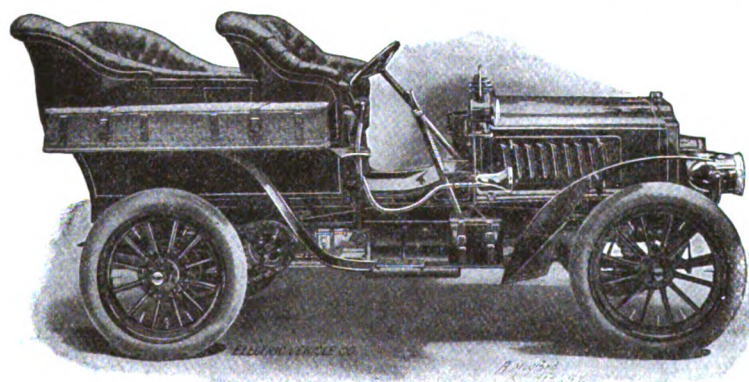
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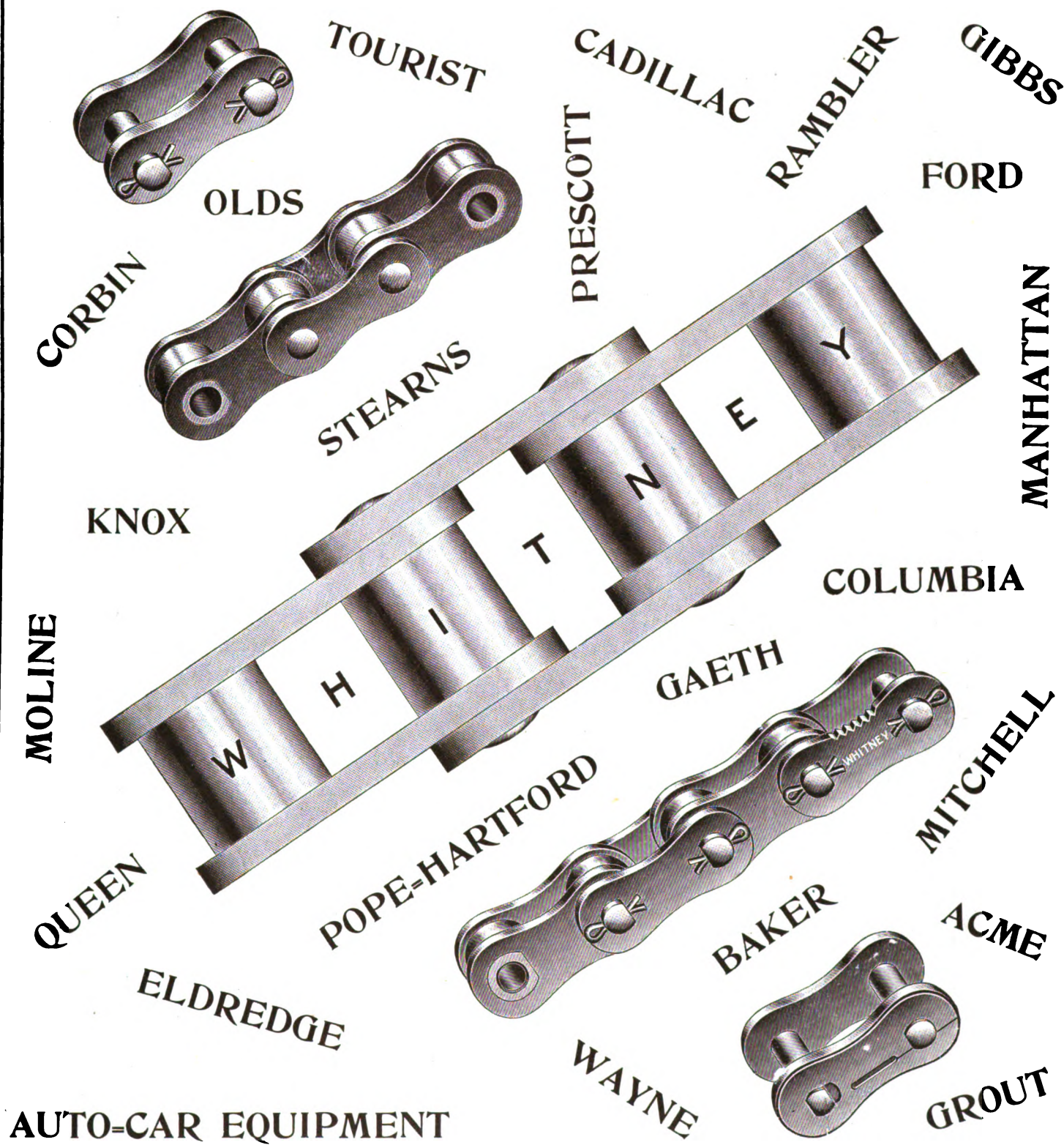
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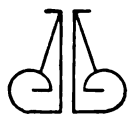
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The Motor World

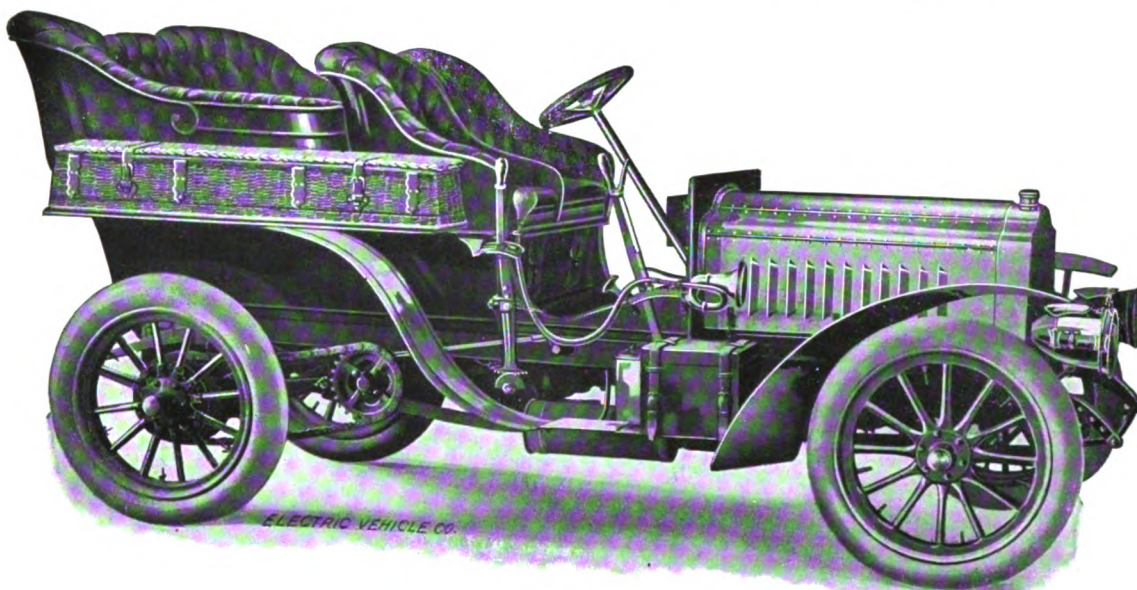
Volume VIII
No. 26

New York, N. Y., U. S. A., September 22, 1904.

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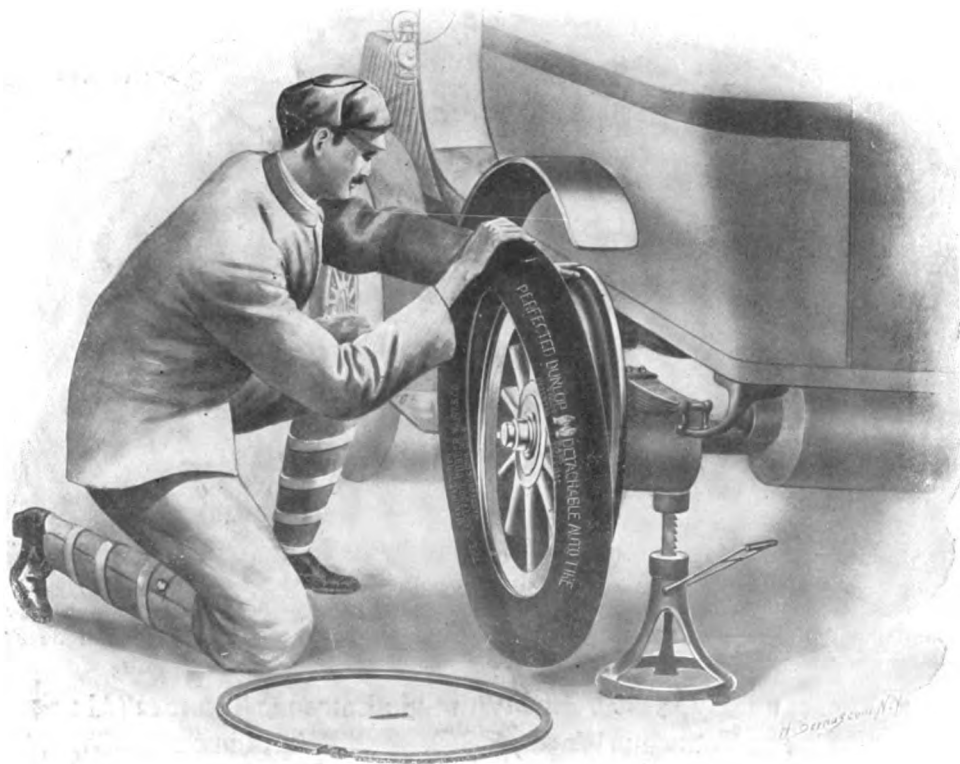
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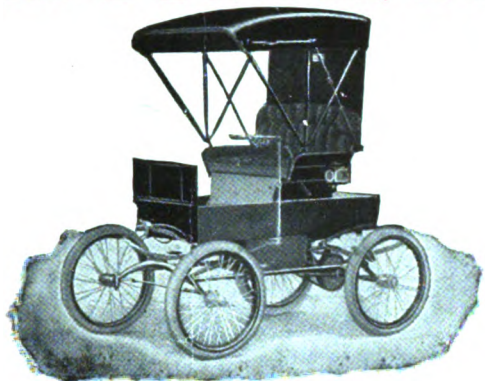
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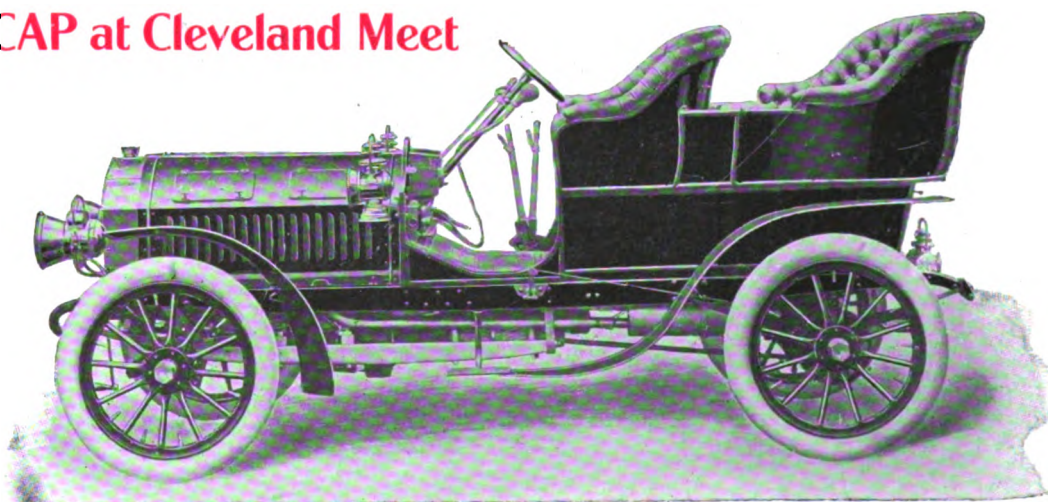
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THIS IS
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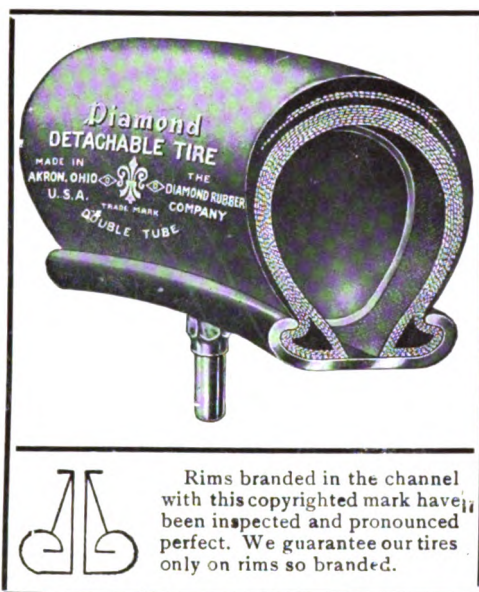
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